REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA;

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.

1834.

REPORT

OF

THE BUILDING COMMITTEE

OF

THE GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS OF PHILADELPHIA.

THE Building Committee having been called upon by Councils to furnish a description of the College, embrace the present opportunity of complying with the request.

They are gratified in having it in their power to say, that the edifice, thus far, is "*constructed with the most durable materials and in the most permanent manner.*" They have carefully avoided the use of any "*needless ornament,*" and attended "*chiefly to the strength, convenience, and neatness of the whole.*"

The house is 111 "*feet east and west,*" *and* 169 "*feet north and south;*" it is "*built on lines parallel*" with the east and west city streets, deviating from a parallel with the north and south streets only as much as said streets deviate from a right angle.

The design adopted by Councils, and now being executed by the Committee, makes the house "*three stories in height; each story*" is "15 *feet high in the clear from the floor to the cornice.*" The elevation of the arch,

together with the thickness of the floor and arch, makes each story 25 feet from floor to floor.

"The whole building" will "*be fireproof inside and outside.*"

"*The floors and the roof are to be formed of solid materials, on arches turned on proper centres, so that no wood will be used except for doors, windows, and shutters.*"

"*Cellars*" are "*made under the whole building; the doors to them from the outside are on the east and west of the building, and access to them from the inside will be by steps descending to the cellar floor from each of the entries or halls hereinafter mentioned, and the inside cellar doors are to open under the stairs on the north-east and north-west corners of the northern entry, and under the stairs on the south-east and south-west corners of the southern entry.*"

There is "*a cellar window, under, and in a line with each window of the first story; they*" are "*built*" 3 feet "*below and*" 3 feet "*above the surface of the ground; the ground outside of each window is supported by strong walls;*" "*the sashes*" are to "*open inside, on hinges, like doors,*" and there is to "*be strong iron bars outside of each window,*" *placed securely in the portico floor.* "*The windows inside and out-side*" are "4 *feet wide in the clear.*"

"There" is "in each story 4 rooms, each room being 50 feet square in the clear."

"The four rooms on each floor occupy the whole space east and west on such floor or story, and the middle of the building north and south, so that in the north of the building, and in the south thereof, there remains" a space of 26 feet, "for an entry or hall in each, for stairs and landings."

"In the north-east and in the north-west corners of

the northern entry or hall on the first floor, stairs" are to "be made so as to form a double staircase, which" are to "be carried up through the several stories; and in the like manner in the south-east and south-west corners of the southern entry or hall, stairs" are to "be made on the first floor, so as to form a double staircase, to be carried up through the several stories; the steps of the stairs are to be made of smooth white marble with plain square edges;" each step is to be $7\frac{1}{2}$ inches rise and 12 inches on the tread.

The outside and inside foundation walls are 14 feet high in the clear from the ground to the ceiling (or under side of the arches); the first floor is eight feet above the level of the ground around the building, after such ground shall have been properly regulated.

The only deviation from any of the details prescribed by Mr. Girard, is in the thickness of the walls; Mr. Girard directs that at a certain height the walls shall be reduced to two feet in thickness;—but a direction like this, in a matter essentially affecting the strength of the building, must naturally be governed by the leading injunctions in the will, that the building should be "constructed in the most permanent and durable manner."

Mr. Walter, the Architect, and Mr. Souder, the General Superintendent, have both unequivocally asserted that the College could not be built in a "permanent manner" with walls of a less thickness than those the Committee are now constructing. Although the Committee have implicit confidence in the skill and practical knowledge of their Architect and Superintendent, yet they have thought it advisable to consult the various plans and communications that were submitted to

Councils, at a time when every mind was unbiassed on this important subject.

R. W. Israel & Co., of Lowel, Massachusetts, say, that the weight of the arches, and the filling up to obtain a level for the floors, would be much too great for the walls.

William Roderigue, Architect and Engineer, says, the walls are limited to 2 feet in thickness, which would leave them too weak to support the pressure of an arch of 50 feet span.

R. W. Crisp, practical builder, remarks in relation to his plan, that he has "increased the thickness of the walls so as to make them more able to carry the superincumbent weight of the arches and roof."

John Kutts, Architect, has made the walls on his plan 3 feet 6 inches thick.

William Strickland, Architect and Engineer, on his plan for the College, in the form of a Greek temple, has laid down the thickness of his external walls at 3 feet, in addition to which he has surrounded the building with 50 massive columns.

Mr. Holden, Architect, has made his exterior walls 6 feet in thickness.

Messrs. Town, Davis & Daken, Architects, New York, have made part of their exterior walls 5 feet thick.

The Committee finding such a concurrence of testimony, among scientific and practical men, in regard to the strength necessary to sustain the immense weight of the roof and the arches, have naturally looked to that portion of the Will directing the College to be built in the most permanent manner. They have accordingly made the walls of a sufficient thickness to sustain the superincumbent weight.

Arrangements have been made for chaining or banding the walls in the manner that Mr. Girard has directed.

The elevation of the roof is one-ninth of the whole span; this being "*as nearly horizontal as may be, consistently with the easy passage of water to the eaves;*" "*the outside walls*" are to "*be carried up of the thickness of two feet,*" *to the height of two feet above the roof,*" and to "*have a marble capping, with a strong and neat iron railing thereon.*"

"*The outside walls*" *are to* "*be faced with slabs or blocks of marble,*" the thickness of none of the courses "*being less than two feet,*" understanding by the thickness the vertical dimensions; these blocks are to be "*fastened together with clamps securely sunk therein.*"

"*The floors and landings, as well as the roof, are to be covered with marble slabs, securely laid in mortar; the thickness of the marble on the roof will be double that of the floors.*"

"*In constructing the walls, as well as in turning the arches, and laying the floors, landing, and roof, good and strong mortar and grout are to be used, so that no cavity whatever may any where remain.*"

Provision is made for a large furnace in each end of the cellar, "*for the generation of heated air,*" and flues are to be constructed in the walls for the purpose of conducting the warm air thus generated to all the rooms in the house.

The Committee deem it expedient to postpone the dividing of the large rooms for library, &c., until the building is roofed in, and the system of education is adopted.

There are two principal doors of entrance into the College, one into the entry or hall on the first floor in the north, and one in the south of the building, and in

the centre between the east and west walls; these doors are proportioned according to the size of the building, the purpose of the doors, and the size of the entry.

The same principle has governed in deciding upon the size and position of all the interior doors and windows.

All the doors are to be double; those opening into the rooms to be what are termed glass doors, and those opening outward to be of substantial wood-work, well lined and secured.

The windows of the second and third stories are to be made in the style of those in the first and second stories of Mr. Girard's late dwelling, in north Water street —that is to say, they are to be made to open in the centre, and hung on hinges the same as doors; the windows of the first story to be in the same style, except that they are not to descend to the floor, but so far as the surbase, up to which the wall is to be carried, in the same manner as in Mr. Girard's house in Passyunk Township.

The whole building is to be surrounded with a portico 21 feet in width, with columns of the Grecian Corinthian order, which is essentially necessary, inasmuch as it affords strength and stability to the third story arches.

As it regards the arching of the first and second stories, there is no difficulty, inasmuch as the superincumbent weight will create a resistance to lateral pressure, and prevent any swerving that might occur from the tremendous pressure of the arches; but the third story arches, not having the advantage of superior weight, must be secured by some other method.

All the arches will be banded with iron. In the words of Mr. Girard, they will "be secured with iron chains," but these chains cannot embrace all that portion of the

wall that is subjected to outward pressure; all the force cannot be positively resolved upon one horizontal line; the chains are of great importance it is true, but something more than chains is requisite. As a dernier resort, therefore, a flank colonnade was adopted.

The weight of the materials used in the construction of the entablature, ceiling of portico, roof, &c., is supported, one-half on the columns, and one-half on the wall of the building; this additional weight, applied directly to that part of the wall receiving the thrust of the third story arches, will prevent any "cracking or swerving," and give strength and durability to the whole work.

In addition to the strength gained by the weight on the walls at the spring of the arches, the ceiling of the portico and entablature will be securely clamped together with iron; by this means a band will be formed around the whole building, which will give permanency and durability to the edifice.

All which is respectfully submitted.

JOHN GILDER,
JAMES HUTCHINSON,
JOSHUA LIPPINCOTT,
DENNIS M'CREDY,
JOSEPH WORREL,
JOSEPH B. SMITH,
JOHN BYERLY,
JOHN R. NEFF.
} *Committee.*

Philadelphia, January 7, 1834.

REPORT

OF THE

ARCHITECT OF THE GIRARD COLLEGE,

TO

THE BUILDING COMMITTEE.

GENTLEMEN,

IN compliance with your resolution directing me to prepare a drawing of the College, together with a report of the state of the works, I have made a perspective view, exhibiting the appearance the building will present when finished;—this drawing, together with the following report, is respectfully submitted.

We have already progressed so far with the work as to be prepared to commence setting marble in the spring.

The outside cellar walls of the house are completed to the height of the floor of the portico; the walls above this, are to be faced with marble.

The interior walls are nearly all as high as those of the outside, and are prepared to receive the arches;—it was thought inexpedient to construct any of the arches this season, in order that the heavy expense of making a temporary roof over the whole building might be avoided.

The materials are on the land, both for the centering and the arches, and they will be constructed early in the ensuing spring.

The walls for the support of the porticoes are raised to the proper height for receiving the columns, with the exception of an opening left for convenience in conveying materials into the building for the interior walls.

The edifice is now about ten feet above, and six feet below the present surface of the ground, making the whole height of the stonework about sixteen feet above the foundation

The walls are all securely covered with straw, and roofed with rough boards, to protect them from injury by frost, during the winter.

The old mansion house, having been found to occupy the most eligible situation for the College, was taken down, and a new farm-house built of the old materials; this house is situated about 300 yards west of the College, and is intended to be rented to some good farmer, for the purpose of having that part of the farm not occupied by the College buildings, brought under a state of culture.

This farm-house is 40 feet front, by 18 feet deep, and two stories high, having a kitchen attached thereto. The plastering is all finished, and the carpenter's work is in such a state of forwardness as to admit of the house being prepared for a tenant by the first of March next.

Contracts have been entered into, on very advantageous terms, for all the marble required in the construction of the College, with the following gentlemen; Messrs. Jacobs & Cornog, Davis Henderson, Jehu Brooks, and John M. Davis & Co. The quarries belonging to these gentlemen are all in the State of Pennsylvania, and within twenty-six miles of Philadelphia; —they have been actively employed in furnishing marble under their respective contracts, during the last four months;—the quality of that already delivered, is very superior.

The stonecutters' work, thus far, merits approbation.

The following materials, not yet made use of in the building, are now on the ground; 3030 superficial feet of ashlar, finished; 2500 do. sawed; 4286 cubic feet of unwrought marble in blocks, suitable for capitals, bases, and architraves, for the exterior porticoes, and ashlar for the building; making in all 9816 feet of marble wrought and unwrought, now on the land. Several of these blocks have been sawed and prepared for capitals

and bases of columns, and carvers are now employed on three of said blocks.

All the lumber for the centering for the cellar story of arches, has been cut to order and delivered on the premises.

About 30,000 feet of common boards for sheathing the centres have also been obtained, and used for the temporary roof on the walls.

The rest of the lumber on the land amounts to about 65,000 feet: the principal part of this is plank for scaffolding.

We have also 375,000 paving bricks, reserved for constructing the arches.

A large quantity of river sand has been obtained, in consequence of the difficulty of procuring that article in the spring.

The whole amount of money expended since the commencement of the work is $ 69,996.

The materials and workmanship that remain unpaid for, amount to about $ 9,000.

There have been erected on the premises, for the accommodation of the workmen, a blacksmith's shop, a carpenter's shop, two stonecutter's shops, a carver's shop, and two sheds for the stone-cutters.

All the contracts have thus far been faithfully executed, and the contractors have given general satisfaction.

I am, gentlemen,
Very respectfully,
Your obedient servant,
THOMAS U. WALTER, *Architect.*
Girard College, December 23, 1833.

To JOHN GILDER, ESQUIRE,
Chairman of Building Committee,
Girard College for Orphans.

SECOND ANNUAL REPORT

OF THE

BUILDING COMMITTEE AND ARCHITECT

OF THE

GIRARD COLLEGE FOR ORPHANS.

December, 1834.

SECOND

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA,

JOHN GILDER, Chairman.

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
L. R. BAILEY, PRINTER.
1834.

REPORT OF THE BUILDING COMMITTEE.

TO THE SELECT AND COMMON COUNCILS
OF THE CITY OF PHILADELPHIA.

THE Building Committee of the Girard College for Orphans, to the Select and Common Councils of Philadelphia,

REPORT,

That in pursuance of the duties of their appointment, it devolves upon them to communicate to Councils their proceedings during the past year.

They take pleasure in saying, that the work under their charge has progressed to their entire satisfaction, and their expectations have been fully realized in its execution.

Nothing has been omitted that would give permanency and durability to the edifice; and all contracts have been made with *strict* reference to economy, on the one hand, and the capability of the contractors on the other.

The Committee would further observe, that the rapidity with which the work has progressed during the past year, merits their approbation.—They are of opinion that more than one story of the College should not be constructed in any one year, and each season's work should be so arranged, as to make the arching, the first business of the year; that course has been thus far pursued, and its advantages are obvious; the arches have time to become sufficiently firm to enable them to resist uninjured, the frosts of winter, and when they are left at the close of the season, there is about 18 feet of the walls of the next story above them, which has a tendency to strengthen them.

The Committee respectfully recommend, that one of the out-buildings be commenced in the ensuing spring; and in order that the arrangement of these buildings, may be such as fully to meet the purposes of the Institution, they recommend, that the Trustees of the Girard College be requested to appoint a committee of eight, who, together with this Committee and the Architect, shall be directed to lay before Councils a plan embracing the whole arrangement of out-buildings.

They respectfully submit the report of the Architect; which document contains a detailed account of the proceedings in relation to the College, during the

past year; also a summary statement of the expenditures since the commencement of the work.

All of which is respectfully submitted.

JOHN GILDER, *Chairman.*
JAMES BURK,
PETER WRIGHT,
JOHN M. BARCLAY,
JAMES HUTCHINSON,
DENNIS M'CREDY,
JOSEPH LIPPINCOTT,
J. ROACH.

Philadelphia, December 26, 1834.

REPORT OF THE ARCHITECT.

GIRARD COLLEGE, December 23, 1834.

To the Building Committee
of the Girard College.

GENTLEMEN:

Having closed the work for the present season, I have the honor, in conformity with your instructions, to lay before you a summary of our proceedings during the past year.

At the date of my last annual report, the walls of the building were so far advanced, as to be prepared for receiving the arches to support the floor of the first story; and your resolution of the 14th of January last, directed that during the season of 1834, the building should be raised to a sufficient height to receive the arches of the second story. This has accordingly been accomplished.

The marble work is now finished to the height of 18 feet 8 inches above the basement, making the present elevation of the building 29 feet above the ground.

The wall for the support of the columns, (which

is 9 feet in thickness, and extends around the whole edifice,) is entirely finished.

The platform around the building is substantially arched, and prepared to receive the marble pavement.

At the close of the last season, all the workmen, except the stonecutters, carpenters, and blacksmiths, were discharged. The stonecutters were occupied during the winter, in carving capitals and bases for the interior columns, and in working the ashlar; the carpenters were engaged in framing centres for the large arches; and the blacksmiths in forging bolts, straps, &c., for the centring.

On the 27th of March the stonemasons and bricklayers commenced work for the season.

The four large groin arches, for the support of the floor of the first story, were commenced on the 25th of April, and finished on the 14th of June; they are constructed in the best manner possible;—each arch contains (exclusive of the abutments) 75,000 bricks; the keys are all composed of marble, fitted and arranged with great accuracy;—all the arches of the basement were finished, and the walls of the first story commenced in the month of June.

In compliance with your resolution of the 11th of March, we have constructed the interior walls, above the basement, of bricks, and the piers for the support of the second story arches, in alternate sections of bricks and dressed granite. Much delay was oc-

casioned to the building, in consequence of not being able to obtain these stones as rapidly as they were required; in order, therefore, to prevent future inconvenience from the same cause, we have placed under contract, all the hammered stone that will be required in the construction of the corresponding piers, in the second story. About one-third of the quantity has already been delivered at the College.

The iron bands for resisting the horizontal thrust of the arches for the second story, are all completed; the iron is of a very superior quality; and well wrought.

The setting of marble was commenced on the 26th of May, and prosecuted with vigor during the remainder of the season. Every attention has been paid to have this part of the work substantially executed; all the ashlar is dowelled together, and securely connected with the brickwork, by means of crampirons.

In the month of April last, we contracted with several carvers in marble, for finishing seventeen of the capitals for the exterior portico; all of these capitals have been commenced, and parts of several of them have already been completed: they are highly creditable to the arts in this country, and will not suffer by a comparison with any imported architectural carving that I have ever yet seen.

The sixteen Ionic columns for the vestibules of the first story, are in progress of execution; twelve capi-

tals, and ten bases are now finished; the remaining part will be completed during the winter.—We are working the shafts of each of these columns in one piece; they are two feet in diameter, and fourteen feet long.

The marble that has been delivered during the past year, fully equals our expectations, both in quality and quantity.—No difficulty has occurred in obtaining the largest blocks that will be required in the construction of the College: some of these blocks have already been conveyed to the building with great facility. In consequence of their unusual size, considerable preparation was necessary, before the contractors were ready to furnish them; we therefore experienced some delay in the early part of the work, but such an arrangement has been made, as to insure the delivery of the heaviest pieces, as rapidly as they will be required.

The quarries of Messrs. Jacobs & Cornog are now in a better state for obtaining marble, than they have been since the commencement of the work;—these gentlemen have ready for delivery several large column blocks, and a considerable quantity of marble for the capitals, all of which they are now about commencing to convey to the building.

All the contractors for furnishing marble have complied with their respective contracts. Some delay occurred, in obtaining stone for the window jambs,

in consequence of their unusual size.—The contractors are now occupied in quarrying the corresponding stones for the second story, so that no future difficulty will arise from this cause.

All the lumber for forming the centres, for the arches of the first story, is under contract, and a considerable portion has already been delivered; these centres will be constructed during the winter, so as to commence setting them, as soon as the walls are uncovered in the spring.

We have suspended for the winter, all work which could not be performed in the shops, and securely covered the walls and arches, so as to protect them from injury by frost.

There have been *two millions* of *bricks, sixteen thousand* superficial feet of *marble, three thousand seven hundred* cubic feet of *granite,* and *one thousand one hundred* perches of *rubble stone,* used in the building during the past year.

There are now on the ground, about *seven hundred thousand bricks,* reserved for commencing work in the spring; we have also about six thousand feet of finished ashlar, window cornice, sills, &c., and seven thousand seven hundred cubic feet of marble in the rough, suitable for capitals, cornices, &c.

The whole quantity of marble delivered during the past year, amounts to 26,082 cubic feet.

The farm house, that was in progress of execution at the time I made my last annual report, has been com-

pleted;—there have also been erected a barn, spring-house and kitchen. All the land not occupied in the building of the College, amounting to about 28 acres, has been put under good fences, and rented to a farmer.

The expenditures from December 23, 1833, to December 23, 1834, amount to -	$112,048
There are now on the ground materials and workmanship unpaid for to the amount of - - - - - - - - - - -	14,500
To which sums, add the expenses of 1833, amounting to - - - - - - -	69,990
Making the whole expense since the commencement of the work amount to -	196,544
From which deduct the sum expended in improving the farm attached to the College building, farm house, barn, &c., amounting to - - - - - - - -	8,500
Making the sum expended and yet due on account of the College, since the commencement of the work, amount to -	188,044
The materials and workmanship now on the ground, and not yet made use of in the building, are worth about - -	23,000
Making the cost of the building in its present state, including all incidental expenses, such as workshops, hoisting machines, tools, &c., amount to - - -	165,044

a sum which is understood to be more than $40,000

less than the income from the College funds during that period.

Permit me to invite your attention to the subject of the "out-buildings."—Whether it is expedient for the general execution of the purposes of the Will of Mr. Girard, to begin the instruction of the orphans before the completion of the College, is a subject on which I do not presume to offer an opinion; but what I venture respectfully to suggest, is, that the works of the College are now so far advanced that the operations can be extended very easily, and advantageously, as they may now be all included under the same system of management, without any additional expense for superintendence.

In this view of the subject, I submit for your consideration the propriety of commencing one of the out-buildings in the spring; it could be completed for use and occupied before the large recitation rooms in the College would probably be wanted; and the whole work, both College and out-buildings, could thus advance together, not only without disadvantage, but with mutual benefit to each other, both as it regards economy and appearance.

I have the honor to be, very respectfully,

Your obedient servant,

THOMAS U. WALTER, *Architect,*
Girard College.

TO JOHN GILDER, ESQ.
Chairman of Building Committee Girard College for Orphans.

REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA;

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

INCLUDING A REPORT ON THE SUBJECT OF THE OUT-BUILDINGS, LAID BEFORE COUNCILS, APRIL 9, 1835.

Philadelphia:

PRINTED BY THOMAS W. USTICK.

1836.

REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS

TO THE

SELECT AND COMMON COUNCILS OF THE CITY OF PHILADELPHIA.

Agreeably to ordinance, the Building Committee of the Girard College for Orphans present the annual report of their proceedings.

The Girard College, so highly interesting and important as it must be to our fellow citizens, has progressed the past year as rapidly as the magnitude of the work would permit, and no exertions have been neglected by the committee, or those under their direction, to hasten to its completion this inestimable project of our city's benefactor, and which, no doubt, will be finished in as short a period as may be consistent with prudence in the erection of so large an edifice, the arches of which are the largest of such construction in the known world.

The Committee refrain from burdening the records of Councils with a detail of their proceedings, referring to the accompanying report of the architect, Mr. Thomas U. Walter.

TO

THE BUILDING COMMITTEE

OF

THE GIRARD COLLEGE FOR ORPHANS.

GENTLEMEN:

In conformity with your resolution of the 29th inst. directing me to lay before you "*A report of the state of the works, together with the expenditures for the past year*," I respectfully submit the following succinct account of our proceedings:

The work having been extended since the date of my last Annual Report, so as to embrace two of the out-buildings, it will be proper for me here to advert to their form and size, and the circumstances under which they were commenced.

On the eighth of April last, I had the honour to lay before you a plan embracing the whole "*four out-buildings*," which was subsequently submitted to the City Councils, and sanctioned by them on the 16th of the same month.

This plan furnishes "*accommodations for at least three hundred scholars, and the requisite teachers, and other persons necessary in such an institution.*"—The buildings are each 52 feet wide, 125 feet long, and three stories high; two of which are situated on the east, and two on the west of the main building.

The easternmost out-building is divided into four

dwelling-houses for professors; the two nearest the College are designed for the residence of the younger students; and the westernmost building is divided into dormitories for the accommodation of scholars of a more advanced age. The basement stories of the three buildings intended for the residence of the students will be arched, and the stairs composed of marble.

As soon after the decision of Councils as practicable, preparations were made for commencing the two easternmost buildings, and in the month of June the foundations of both were laid; that nearest to the College is far enough advanced to commence the vaulting, and the walls of the other are raised to the top of the basement.

When these buildings were commenced, we expected that at least one of them would have been ready for the roof before the close of the season; but this we were unable to accomplish, in consequence of the difficulties which have occurred among the mechanics of Philadelphia and its vicinity: these difficulties being now satisfactorily and happily adjusted, we shall be able to enclose the two out-buildings now commenced, and raise the College sufficiently high to receive the arches for supporting the roof, during the ensuing season.

At the close of the year 1834, the walls were so far advanced, as to be prepared for receiving the arches for the support of the floor of the second story, the construction of which was commenced early in the past season, and finished in the month of August. The walls of the second story have since been raised to a sufficient height to enable us to commence, early in the next season, to construct the arches over the two north rooms for supporting the floor of the third story; before

these are completed, the two south rooms will be prepared for arching.

The marble work of the cell of the building is now about fifty feet above the ground, and it will undoubtedly be raised to its destined height before the close of the year 1836.

The centres on which the arches for the support of the first story floor were constructed, have been removed; and it affords me pleasure to say, that no settling, swerving, nor even the elasticity that is usually observed on removing the centering from large arches, is discoverable in any of the work—although the rooms over which these arches are constructed are each fifty feet square in the clear.

The blacksmiths are now engaged in preparing the iron-work for banding the third story arches, some of which are already finished and embedded in the walls; the remainder will be so far advanced during the winter as to prevent any delay in the construction of the building.

All the marble work of the lower vestibules is completed: the consoles for the front doors are finished; and the architraves forming the door-heads are all prepared for their places in the building.

The contractors for carving the capitals for the columns of the exterior portico, have executed their work entirely to our satisfaction: five of these capitals are already completed, and several others are in a state of forwardness.

All the marble used in the construction of the College and out-buildings during the past year, amounts to 21,978 superficial feet; in addition to this, there are now on the ground about 10,218 feet of finished work, consisting of ashlar, window-cornice, and architraves,

not including capitals and bases of columns for the exterior portico;—we have also 5238 feet of marble which has already been sawed for ashlar, capitals of columns, window cornice, &c., and about 8000 cubic feet of marble in the rough, the greater part of which will be wrought during the present winter.

The whole quantity of marble delivered at the College in the year 1835, amounts to 26,369 cubic feet, all of which was furnished from quarries in Pennsylvania.

At the close of the season of 1834, there were remaining on the ground about seven hundred thousand bricks, since which time one million three hundred and twenty-seven thousand have been delivered at the college, making in all two millions and twenty-seven thousand; of which we have used in the buildings during the past season, *one million five hundred and ninety-seven thousand*, leaving about *four hundred and thirty thousand* bricks on the ground, which are reserved for commencing the work in the spring.

Six thousand five hundred cubic feet of dressed granite, for forming the groin piers, have been delivered at the work during the past year; of which four thousand five hundred feet have been already used, leaving two thousand cubic feet now on the ground; this quantity will be sufficient to finish all the groin piers in the building.

The expenditures from December 23d, 1834, to December 23d, 1835, amount to 121,079.

The materials and workmanship now on the ground, and not yet made use of in the building, are worth about 60,000 dollars.

It affords me pleasure to say, that every part of the work has been executed in the most permanent and

durable manner; the arches are very superior specimens of masonry, and the walls have been constructed with great solidity. The marble work merits the highest approbation, both as it regards strength and appearance; the beauty of the sculpture, and the facility with which it is executed, must unquestionably establish the fact, that we have sufficient talents in this country to execute architectural carving as well, and as rapidly, as it can be accomplished elsewhere.

I have the honour to be, gentlemen,

Very respectfully,

Your obedient servant,

THOMAS U. WALTER, *Architect.*

Girard College, December 23, 1835.

To JOHN GILDER, ESQ.
Chairman of Building Committee,
Girard College for Orphans.

The Building Committee of the "Girard College for Orphans," respectfully ask leave to lay before Councils the accompanying design for the "*out-buildings*" of the College, together with a Report from the Joint Committee, and a communication from the Architect of the College.

All of which is respectfully submitted,

JOHN GILDER, *Chairman*,
I. ROACH,
JAMES HUTCHINSON,
PETER WRIGHT,
DENNIS M'CREADY,
JOSHUA LIPPINCOTT.

PHILADELPHIA, April 9, 1835.

REPORT, &c.

In compliance with the Ordinance of Councils, the Joint Committee, consisting of an equal number of the members of the Select and Common Councils, and of the Trustees of the Girard College for Orphans, have the honour to report to the Councils,

A plan of the four out-buildings, the erection of which is ordered by the Will of Mr. Girard.

The accompanying drawings, prepared by the architect, will show distinctly the position—the style of architecture—and the internal arrangements of these buildings; and will supersede the necessity of any detailed explanation in regard to them.

The general results which the Committee aimed to accomplish were—

1st. To prepare a substantial residence for the pupils, embracing every thing necessary for their health and comfort—well lighted—well aired—with ample and thoroughly ventilated bed-rooms and eating-rooms —cool in summer, and capable of being safely and uniformly heated in winter, and with a distribution of the apartments adapted to the arrangements which will probably be made hereafter, for the division and instruction of the pupils.

2d. To conform the dimensions of the buildings to the immediate wants of the College, with a power to increase their size, or to augment their numbers, as may be required by the gradual enlargement of the institution.

The Will of Mr. Girard prescribes, that "there shall be erected a permanent College, with suitable out-

buildings, sufficiently spacious for the residence and accommodation of at least three hundred scholars, and the requisite teachers and other persons necessary in such an institution;" and again, he directs that there should be at least "four out-buildings, detached from the main edifice and from each other, and in such positions as shall at once answer the purposes of the institution, and be consistent with the symmetry of the whole establishment." The Committee are of opinion that it is most judicious to begin with preparations for about three hundred pupils, as suggested by Mr. Girard—and their plan, therefore, contemplates *three buildings*, each containing accommodations for at least one hundred pupils, and a *fourth building*, for the residence of the officers of the institution. These three buildings will each be ample for at least one hundred pupils—a number which will probably afford the means of more minute attention and care to each individual pupil—better ventilation—a more exact discipline—and readier means of classifying them according to their age and their progress in study, than could be attained were much larger masses of pupils placed under the same roof. As the institution expands, these buildings can be proportionally multiplied. Four larger buildings, the number directed by Mr. Girard, would not be needed at the commencement of the institution—they would be much more expensive, and their size would require more time for their completion, and thus postpone the opening of the College, which the committee are anxious to hasten as far as practicable. For this purpose, moreover, it would be expedient to begin with the two eastern out-buildings.

3d. The position of the buildings was adopted in conformity with the direction of Mr. Girard's Will, that "they should be consistent with the symmetry of

the whole establishment." The plan proposes to place two of them on each side of the College—to make them front the south—to be in the same general range with the College, but receding somewhat from the front line, the first being at the distance of 140 feet from the College, with an interval between the two buildings of 87 feet.

The effect of this arrangement will be, to present one uniform and symetrical appearance, as the establishment is approached from every quarter—to have the buildings near enough to the College to afford to the pupils an easy access to it, yet not so near as to mask the College itself—while on each side is left ample room for increasing their number, or, if future experience should recommend it, enlarging the size of the buildings. The same considerations of symmetry, as well as durability, recommended by Mr. Girard, indicate, in the opinion of the Committee, that the buildings should have the same general appearance as the College itself, and for that purpose, that they should be faced with marble or granite.

These various advantages——the comfortable and healthful accommodation of the pupils—the adaptation of the buildings to the instruction and discipline for which they are designed—a position accessible from the College, yet not interfering with the view of it—their general uniformity of appearance, so as to make, with the College, one harmonious whole—and finally, the ability, upon the same general plan, to enlarge the buildings with the future growth of the institution; all these the Committee have endeavored to combine, and after much reflection, and personal examination of the localities, they have unanimously united in the plan which they now very respectfully submit to the consideration of the Councils.

N. BIDDLE, *Chairman.*

To the Building Committee of the Girard College for Orphans.

GENTLEMEN:

I have the honour to lay before you a perspective view of the "*Girard College for Orphans*," embracing the "*out-buildings;*" together with a plan of the whole establishment, as adopted by the "Joint Committee" on the 2d instant.

I have represented, in perspective, the south front, as it will appear from the east side of Schuylkill Third Street. The finish of the north front will be similar to that of the south.

This design embraces the College (as previously adopted by Councils), and "*four out-buildings*," each of which is 52 feet wide, by 125 feet long, and three stories high.

The two buildings nearest the College were designed for the residence of the youngest scholars. Each of these buildings contains a *basement story*, in which the dining-room, kitchen, &c., is placed; a *principal story*, containing sitting-rooms for students, receiving-room, parlours for tutors, &c.; and *two upper stories*, which are divided into lodging-rooms for students, tutors, domestics, &c.

The upper stories are approached by means of stone stairways at each end of the halls. These halls are eight feet wide, and extend the whole length of the building, on every floor or story.

The westernmost building, being intended for the residence of older students, is divided into small dormitories. The refectory and kitchen are in the basement; the three upper stories contain accommodations

for tutors and domestics, together with a sufficient number of dormitories for one hundred scholars.

The basement stories of the three buildings intended for the residence of the students, are to be arched, and the stairways are to be constructed of stone.

The easternmost building is divided into separate dwelling-houses for professors.

These four out-buildings, together, will be "*sufficiently spacious for the residence and accommodation of at least three hundred scholars, and the requisite teachers and other persons necessary in such an institution.*"

I have estimated the expense of executing the *four out-buildings* according to the design, and find that the whole will cost $225,000, understanding that they are to be faced with marble. Two of these buildings may be enclosed in this year, and finished in 1836—the remaining two may be finished in 1837.

In answer to your resolution, requesting me "*to state the greatest amount of work that may be accomplished during the present season,*" permit me to say, that I would consider it injudicious to recommend the construction of more than one story of the large arches in the College in any one season. The extraordinary dimensions of these arches renders it necessary to use every precaution, not only in their execution, but in protecting them after they have been formed.

The arches for the support of the floor of the second story will be constructed early in the present season, and it would be impossible to progress so rapidly with the building, as to succeed in turning the arches for the third story floor before the month of October or November. Were we to pursue this course, and construct the arches in the fall, the frosts of winter would expand the materials, and destroy the strength of the

work. There is required about 25 feet in height on the whole building, together with one story of arching, before we will be prepared for turning the arches for the third story floor; in addition to this height, the walls may be carried up five feet above the springing line of the arches, previous to constructing them, making 30 feet in height—this may be accomplished without difficulty during the present season, and will cost, including the work to be done on the porticoes, $180,000.

The expense of enclosing two of the out-buildings, will be about $80,000, making an aggregate of $260,000.

This amount of work may be executed during the present year without difficulty, and with perfect safety to the edifice.

I have the honour to be, gentlemen,

Your obedient servant,

THOMAS U. WALTER,
Architect.

GIRARD COLLEGE, April 8, 1835.

REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA;

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.

1837.

REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS

TO THE

SELECT AND COMMON COUNCILS OF THE CITY OF PHILADELPHIA.

The Building Committee of the Girard College for Orphans respectfully ask leave to

REPORT:

That the work under their charge has progressed during the past year to their entire satisfaction.

All the contracts in connexion with the several buildings have been faithfully executed, and no exertions have been spared to render this stupendous structure one of the most permanent edifices of the age in which we live.

This beautiful work of art will form (when completed), an object of the highest interest, especially to Philadelphians, inasmuch as no country on earth can boast a purer specimen of architecture, or a more substantial and elegantly wrought memorial to convey to distant ages the spirit of the present times.

The report of the architect to this Committee, furnishes a clear and concise account of the operations

of the past year; we therefore take the liberty of referring you to that document for further information on the subject.

We cannot close this report without adding another testimony in favour of our estimable architect, Thomas U. Walter Esq. Nothing has afforded us greater satisfaction, than to observe the skill, good taste, and faithfulness with which he manages this colossean work.

We also notice with peculiar satisfaction the commendation that Mr. Walter bestows upon the superintendents of the mechanical branches. These gentlemen have merited our entire approbation and confidence.

The Committee beg leave further to remark, that it is their intention to suffer no means in their power to remain unemployed to expedite the speedy completion of the work.

All of which is respectfully submitted.

ISAAC OTIS, Chairman.
HENRY SAILOR,
WILLIAM V. ANDERSON,
JOHN WIEGAND,
DENNIS M'CREDY,
ISAAC ELLIOTT,
JOHN S. WARNER.

TO

THE BUILDING COMMITTEE

OF

THE GIRARD COLLEGE FOR ORPHANS.

GENTLEMEN:

Having been directed by your resolution of the 27th ultimo, to lay before you "*a report of the state of the works,*" I respectfully embrace the present opportunity to comply with your request.

The marble work of the cell of the centre building has been raised about ten feet during the past year, making its present height above the ground about sixty feet.

All the bands and ties for resisting the lateral pressure of the arches over the second story rooms, are firmly fixed in the walls, and the centres are completed, and prepared to receive the brickwork;—all therefore that remains to be done to complete this story, is simply the construction of these arches, and the setting of the marble in the lobbies, which will consequently be the first work of the ensuing season.

We had expected to finish all the second story arches during the past summer; but the unusual se-

verity of the previous winter, and the backwardness of the spring, put it out of our power to advance with this part of the work as rapidly as we had anticipated. We have, however, been actively employed on other parts of the buildings; having accomplished, in the aggregate, at least one-third more during the past year, than in any previous season since the commencement of the work.

The easternmost *out building* is now under roof, and the carpenters are engaged in finishing the interior.

The out building nearest the College requires about ten feet in height of marble work to complete the exterior, the greater part of which will be wrought during the winter, so as to enable us to put this building under roof early in the ensuing season:—both of these out buildings will be completed during the present year, and may be occupied as soon as they are finished, without interfering with the rest of the work.

At the commencement of the last season, there were *four hundred and thirty thousand bricks* remaining on the ground from the previous year; since which time, there have been delivered at the works, one million five hundred and ninety thousand, making in all, two millions and twenty thousand; of which *one million five hundred and twenty thousand* have been used in the buildings, leaving about *five hundred thousand bricks* now on the ground to commence operations with in the spring.

The amount of marble work done during the past season is almost double that of any previous year; and the character of the workmanship still merits the highest commendation.

The execution of the carving of the exterior capitals continues to give entire satisfaction.

Several of the large bases and column blocks are now in the hands of the workmen, and it is intended to continue with this part of the work during the winter, so as to enable us to proceed at the opening of the ensuing season, with the eastern portico, the two south columns of which have already been commenced.

The columns, antæ and entablature for the lobbies in the second story are in progress of execution; there are now completed, for this part of the work, ten capitals, fourteen bases, seven shafts of columns, and a considerable quantity of the architrave and antæ; the rest will be finished in the course of three or four months.

All the marble used in the buildings during the past year, amounts to 40,588 superficial feet, and there are now on the ground 12,338 feet of finished work, 2,173 feet of sawed material, and 3,950 cubic feet in the rough.

It is a source of great satisfaction to be able to state, that all our apprehensions in regard to the supply of marble are relieved, as the contractors have begun to work another quarry, which will enable us to obtain, without difficulty, all that may be required for the completion of the College, and all the buildings connected with it.

The whole amount of marble delivered during the past year, amounts to 39,722 cubic feet;—more than one hundred column blocks have already been quarried, and all that will be required for the exterior portico can be procured, if necessary, during the ensuing season.

The expenditures, from December 23, 1835, to December 31, 1836, amount to $ 153,949 74.

I have estimated the value of the materials and workmanship now on the ground, which have not yet been used in the building, at about $ 68,000, nearly all of which will be used during the present year.

I am happy to have it in my power to say, that thus far nothing has been omitted that would tend to give permanency and durability to the buildings;—the plans have been correctly executed, and the various departments of the work have all been faithfully and judiciously managed, by the gentlemen whom you have appointed over the several mechanical branches.

The propriety of commencing the two western out buildings in the spring, is a subject to which I would respectfully request your early consideration;—the foundations of these buildings may be laid, and the marble work constructed as high as the basement during the ensuing season, without interfering with the other work; I therefore venture to suggest, that arrangements be made for extending the work, so as to embrace these two buildings.

I am, gentlemen, with assurances
of the highest consideration,
your obedient servant,
THOMAS U. WALTER,
Architect.

GIRARD COLLEGE FOR ORPHANS,
Philadelphia, January 2, 1837.

FIFTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA;

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.

1838.

REPORT

OF

THE BUILDING COMMITTEE

OF

THE GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS OF PHILADELPHIA.

The Building Committee of the Girard College for Orphans, respectfully

REPORT,

That during the last year, the work under their direction has progressed towards completion to their entire satisfaction; all the contracts for work and materials have been punctually complied with, and no unnecessary delay has occurred in any branch of the work.

The marble work has been finished as high as the top of the second story arches;—the arches themselves are completed, and a temporary roof has been constructed over the whole building to preserve the work during the winter; as a further measure of precaution, furnaces have been constructed in the cellar, and the heat conducted by means of the flues to all the rooms;—this plan the Committee believe will have the effect of preventing much injury that might otherwise arise from the mois-

ture retained in the great masses of solid masonry of which the building is composed.

Most of the columns on the east flank have been commenced; three have their caps on, and one of them has been completely fluted; the others are in various states of forwardness.

Thus far the appearance of the buildings has fully realized the expectations of the Committee; nor can they refrain from expressing their gratification at the progress of these great works, by our native artists, which will remain lasting monuments of the taste and public spirit of the community; from the height of the buildings, as prescribed by the founder, it became necessary to adopt a style of columns of the most difficult order, the execution of which was hitherto deemed the peculiar province of foreign artists. But the intelligence of our own workmen soon surmounted these difficult novelties, and the most intricate forms of architecture have been executed in a manner so masterly, that the College may safely challenge a comparison with the most admired structures of modern times.

The sum expended during the past year amounts to about $180,000, and there remains on hand worked materials to the amount of upwards of $85,000, which will enable the Committee to prosecute the work to great advantage early the ensuing season.

For further details in relation to the progress, and present state of the work, the Committee respectfully refer to the able report of the Architect, which is attached to this paper.

The Committee continue to repose entire confidence, and have perfect satisfaction in the conduct and ability of all those employed to superintend and carry into execution the various plans of the Architect, towards com-

pleting the grand designs of the liberal and patriotic Girard; and they are determined to spare no pains to make it as permanent as the great founder himself could have wished were he personally superintending it.

The Committee cannot forbear expressing their entire approval and satisfaction of the commendations bestowed by the Architect upon the workmen. Their conduct throughout the progress of the work has been such as to meet the wishes and expectations of all; for correctness of behaviour, steady attention to work, and general interest in the execution of all parts of the work, the Committee do not believe they are exceeded any where.

JAMES HUTCHINSON,
JOHN WIEGAND,
CORNELIUS TIERS,
ISAAC ELLIOTT,
I. ROACH,
JOHN LINDSAY,
D. WINEBRENER,
WILLIAM V. ANDERSON.

Philadelphia, January 3, 1838.

REPORT

OF THE

ARCHITECT OF THE GIRARD COLLEGE,

TO

THE BUILDING COMMITTEE.

GENTLEMEN—

I HAVE the honour, in conformity with your resolution of the 26th inst., to communicate the following report on the progress of the work during the past year.

The marble work of the centre building is raised to the height of the third story floor; all the arches over the second story are completed, and the quoins are commenced for the vaulting to support the roof;—nearly all the marble required to complete the cell of the building has been wrought;—two of the large antæ capitals are finished, and the workmen are now engaged in executing the other two;—three of the columns on the eastern flank have been raised to their destined height, two more are ready to receive their capitals, and two others are more than half finished;—one of these columns has been fluted and entirely completed, and the fluting of another is nearly finished; several of the large architraves have been delivered; also about 7000 cubic

feet of marble for bases, capitals, and columns, beyond what has been used, nearly all of which will be wrought during the winter.

The carpenters are now about commencing the centres for the third story arches, all of which will be ready to set as soon as the spring opens.

The easternmost out building, which embraces the dwellings of the Professors, is nearly completed, and the building nearest the College is in such a state of forwardness as to admit of its being finished (if required), in three or four months;—I am, however, of opinion, that neither of these buildings should be entirely completed until the time shall have been agreed upon for occupying them, as new buildings deteriorate much faster without occupants than with them;—it would, therefore, be better to keep them in such a state of forwardness that possession may be given at a few weeks notice.

The whole quantity of marble that has been delivered during the past year, amounts to 37,648 cubic feet;—31,974 superficial feet have been wrought and used in the building, and there are now on the ground about 13,500 feet of finished work, 1828 feet that have been sawed principally for ashlar, and 5564 cubic feet in the rough.

There have been 873,150 bricks delivered at the work during the last season, which, together with the 500,000 left on hand from the previous year, makes 1,373,150, of which 1,211,150 have been used in the building, leaving 162,000 bricks now on the ground.

All the contracts have been faithfully executed, and every part of the work reflects the highest credit upon the superintendents of the various mechanical branches;—an unusual degree of skill and industry has also been

evinced by the workmen, and the most perfect harmony has prevailed in all the departments of the work.

The delivery of marble during the past year has fully equalled our expectations, and there remains no doubt that the contractors will be able to continue the supply as rapidly as it will be required.

The expenditures, from December 31st, 1836, to December 30th, 1837, amount to $181,839 79.

There is now on the ground about $85,000 worth of materials and workmanship which have not yet been used in the building, and which includes capitals, bases, column blocks, and architraves for the portico, the marble for finishing the cell of the main building, and the steps and yard walls of the out-buildings, all of which will be available for the work of next season.

The building is now in a situation to admit of more work being done during the ensuing season than has been accomplished in any one year since its commencement:—the marble work of the cell being nearly completed, there will be nothing whatever to interfere with the progress of the brick work; all the arches of the third story may therefore be constructed, and the building prepared for the roof, before the close of the season;—the columns and architraves of the flank porticoes, and the steps and yard walls of the out buildings, may also be readily finished during the next year, as the whole attention of the stone-cutters will be directed to these objects:—about $285,000 will be required to accomplish this amount of work; it therefore only remains for you to say whether the buildings shall be advanced thus rapidly or not.

A temporary roof has been constructed over the whole of the main building, and the greatest precaution has been taken to prevent injury from frost;—conductors

have been made to lead the water from the top of all the arches into sinks in the cellar, for the purpose of preventing the rains that fall on the work during the summer from percolating through the abutments and arches, and saturating the work in the lower stories.

Temporary furnaces for drying and warming the building during the winter have also been constructed, and the warm air introduced into every room in the house, notwithstanding the unfinished state of the work; —this arrangement was deemed expedient, not only to prevent injury to the arches from congelation and consequent expansion by cold, but also for the purpose of evaporating as much dampness from the walls as possible, previous to the occupancy of the building.

The expansible properties of *iron* having been a subject of considerable conjecture in reference to the bands for resisting the lateral pressure of the arches, I was induced to make an experiment for the purpose of discovering the actual difference of temperature produced in the middle of the walls, by the extreme heat of summer and the severest cold of winter.

Although I have never had an idea that any evil could possibly result from the expansion of the iron in question, by an increase of temperature, the materials which surround it being subject to an expansion almost (if not quite), equal to that of the iron, yet the satisfaction to be derived from positive evidence on the subject is sufficient to give interest to the experiment;—I shall therefore give a brief account of the manner in which it was conducted, so as to enable you to judge how far the result may be relied on.

The place selected for the experiment was the brick wall between the south vestibule and the large rooms; —the thickness of this wall is five feet five inches, and

its distance from the south front of the cell twenty-six feet; the sun had therefore full power upon it during the summer, and in the winter the whole building was covered with a temporary roof:—I should also remark, that the experiment was completed before any fires were made in the furnaces.

On the 23d of September, 1836, the temperature on the work being at 82° Fahrenheit, a self-registering *minimum* thermometer was placed upon the iron band in the middle of the wall, and the brick work constructed as solidly around it as the rest of the building.

On the 29th of July, 1837, the temperature being again at 82°, a hole was made in the wall, and the thermometer taken out, when it was found that the register had descended to 42° during the intermediate winter, the extreme cold of which was 3° below zero:—thus we find the greatest cold in the middle of the walls to be 42°.

On the 16th of January, 1837, the temperature on the building being 24° Fahrenheit, a self-registering *maximum* thermometer was placed on the iron band in the middle of the aforementioned wall, on the same horizontal line with the other thermometer, and about sixty feet distant from it, a space having been left in the wall when it was built, for the purpose; which space was walled up around the thermometer as firm and compact as the rest of the work.

On the 16th inst., the temperature on the building being again at 24°, the walling was taken out, when it was found that the register in the thermometer had went up to 61° during the intermediate summer, the greatest heat of which was 94°.

We have therefore 42° for the lowest temperature of the iron bars, and 61° for the highest, making a difference of 19°.

The expansion that an increase of temperature of 180° produces upon maleable iron, is given by Dr. Ure, in his Dictionary of Chemistry,* as follows:

From experiments by Smeaton $\frac{1}{7\,9\,4}$ of its length; according to Borda's experiments $\frac{1}{8\,6\,5}$ of its length; and according to Dulong and Petit $\frac{1}{8\,5\,6}$ of its length.

Mr. Hassler, (of New Jersey), in his "Account of Pyrometric Experiments," read before the American Philosophical Society, June 29th, 1817,† finds the expansion to be equal to $\frac{1}{7\,9\,8}$ of its length; and in a work on Natural Philosophy, by Biot,‡ we have the experiments of Lavoisier and Laplace, made in 1782, giving an expansion, under the same increase of temperature, equal to $\frac{1}{8\,1\,9}$ of its length.

The trifling difference in these results may be attributed to a difference in the density of the material.

Now, if 180° will increase a bar $\frac{1}{7\,9\,4}$ of its length, (this being the greatest expansion obtained by the foregoing experiments), 19° will lengthen it only $\frac{1}{7\,3\,5\,6}$; hence the bands around the rooms of the College, (each being 54 feet long from the points of support), will be subjected to a difference in their length between the extreme heat of summer and the severest cold of winter, of $\frac{1}{7\,3\,5\,6}$ or $\frac{1}{1\,3}$ of an inch.

This being the actual difference produced in the length of the iron bands, by the greatest change of temperature to which they can be subjected, it remains for us to consider the expansibility of the materials with which they are surrounded.

* Ure's Dictionary of Chemistry, page 272.

† Transactions of the American Philosophical Society—new series—Vol. I., page 227.

‡ Physique de Biot, Vol. I.

A table on the expansion of different kinds of stone, &c., from an increase of temperature, is given by Mr. Alexander J. Adie, civil engineer, in a paper read before the Royal Society of Edinburgh, on the 20th of April, 1835,* in which he makes the expansion produced upon bricks by 180° of Fahrenheit, equal to $\frac{1}{118}$ of its length, or $\frac{1}{2\frac{1}{6}}$ of an inch in 54 feet under an increase of temperature of 19°.

If, therefore, the maximum expansion of one of the iron bands in the walls of the College is $\frac{1}{12}$ of an inch, and the brick work surrounding it $\frac{1}{2\frac{1}{6}}$, the difference is then reduced to nearly $\frac{1}{2\frac{1}{2}}$ of an inch:—but if we consider that the variation of temperature in the interior of the wall is only 19°, while the exterior is subjected to the extremes of heat and cold, it will be obvious that the aggregate expansion and contraction of the brick work is even greater than that of the iron.

From these considerations, it is evident that not the slightest injury can possibly result from the use of iron in the construction of the College.

I am, gentlemen, very respectfully,
your obedient servant,
THOMAS U. WALTER, *Architect.*
Girard College, December 30, 1837.

To James Hutchinson Esq.
Chairman of Building Committee,
Girard College for Orphans.

* See Journal of the Franklin Institute of the State of Pennsylvania, Vol. XX., page 200.

SIXTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA:

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.

1839.

REPORT

OF

THE BUILDING COMMITTEE

OF

THE GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS OF PHILADELPHIA.

THE Building Committee of the Girard College for Orphans, respectfully

REPORT,

That agreeably to the directions of Councils, contained in the Resolution passed March 29th, 1838, requiring them to use all diligence in carrying on the work at the College; they have, during the last season, progressed as fast as was consistent with the durability of the structure.

All the columns for the flank colonnades have been commenced, and several of them are considerably advanced;—the marble work of the *cell* of the building, and the arches of the third story rooms, are finished.

The whole building is covered with a temporary roof, and the furnaces for drying the walls are in operation; the experience of the last winter having confirmed their utility.

The two eastern out-buildings are as nearly completed as they can be, until Councils decide upon the period of their occupancy.

The amount expended during the past year has been $229,937, and there are remaining on hand, materials worth $125,000, which will enable the Committee to commence operations early in the spring.

The balance of appropriations, unexpended at this time, is about $27,000.

The manner of supplying the College with water has been a subject of serious consideration with the Committee, and they have now the satisfaction to state, that an arrangement has been made with the Watering Committee for a supply, upon a plan recommended by the Architect, which is not only perfectly practicable, but involves the least possible expense, and which will be, at the same time, a source of income to the City. For the plan itself, the Committee refer more particularly to the Report of the Architect, and the Resolution passed by the Watering Committee, both of which accompany this Report.

The propriety of commencing the wall around the College, having engaged the attention of the Committee, it became a question whether the whole of the land appropriated for the College must be enclosed by a wall of the character designated in the Will, or whether it would be sufficient to enclose only so much of it as would be necessary for the buildings. On a question of so much importance, the Committee did not think themselves competent to decide, but agreed to refer the matter to John Sergeant, Esq., for a legal opinion.

That opinion has been received, and accompanies this Report.

The Architect, in his Report, has suggested the pro-

priety of extending the work so as to embrace the wall necessary to enclose the College grounds, the two western out-buildings, and the arrangements for supplying the establishment with water. The Committee are, however, of opinion, that it would be advisable to postpone the commencement of the wall, as well as the two western out-buildings, for another year, the better to enable them to hasten the completion of the main building. They therefore recommend the appropriation of *three hundred thousand dollars* for the ensuing year, which, with the balance on hand, will enable the Committee to carry on the work proposed.

The Architect having given, in the Report alluded to, a full and lucid description of the progress of the work during the last year, the Committee would respectfully refer Councils to that document for a detailed account of their operations.

The complete success that has attended the arching of the main building, is a subject to which the Committee refer with the greatest satisfaction. The small rise to which the first and second stories of these arches were necessarily restricted, compared with the greatness of their span, rendered it indispensable to use the utmost care and skill in their construction. It is therefore peculiarly gratifying to know, that the lateral pressure of these arches has been so completely counteracted, and the masonry so firmly put together, that not even the ordinary contraction, arising from the nature of the materials, is any where perceptible, since the removal of the supports upon which they were constructed.

These arches will doubtless endure, uninjured by time, to the latest generations, to perpetuate the memory of the great Philanthropist to whose munificence we are indebted for this magnificent structure. As regards the

arches of the third story, the Committee are gratified to say, that while they present the same excellence of workmanship and materials as those below, their form is beautiful in the highest degree. The proportions of the domes that cover these ample rooms, cannot fail to impress the spectator with the most agreeable sensations, and there is perhaps no where to be found a suite of apartments of equal magnitude and elegance.

The Committee cannot refrain from expressing their approbation of the manner in which the work has been conducted under the direction of the Architect, and executed by the workmen. The most difficult designs in the art of architectural sculpture have not only been accomplished by native skill, but a boldness of execution and a delicacy of finish have been imparted to them, which leaves them without a superior in any corresponding works in our country.

All which is submitted by the Committee.

JAMES HUTCHINSON,
JOHN LINDSAY,
D. WINEBRENER,
CORNELIUS TIERS,
GEORGE SHARSWOOD,
ISAAC ELLIOTT,
JOHN WIEGAND,
JAMES ANDREWS,
Committee.

Philadelphia, January 31*st*, 1839.

REPORT

OF THE

ARCHITECT OF THE GIRARD COLLEGE,

TO

THE BUILDING COMMITTEE.

GENTLEMEN—

IN conformity with your Resolution of the 5th instant, I have the honour to lay before you the following Report on the progress of the work, during the past year.

The arches over the rooms in the third story of the main building are entirely finished,—the marble work of the *cell* is completed,—the columns and architraves of the south vestibule, to the third story rooms, are erected and prepared to receive the vaulting to support the roof,—and those of the north vestibule are so far advanced as to admit of their being completed during the winter. The centres are all prepared for these vestibules, so that the arches may be constructed early in the ensuing season.

The centres, or supports upon which the third story arches were formed, have been removed,—those in the second story are freed from the brickwork, and the workmen are now engaged in taking them out,—and

those in the first story were removed in the early part of the season:—we have therefore the satisfaction to know, that all the large arches are completed, and are now standing independent of the supports upon which they were constructed, without having produced the slightest fracture or settling in any part of the building. I am induced to make these remarks from the fact, that the great length of the *chord* of the arches in the first and second stories, compared with their small *versed sine*, led many to doubt the possibility of making them permanent. Although such apprehensions were most certainly never indulged by those who are conversant with the theory of arches, it still becomes necessary for me to lay the result before you, as the subject is one that was freely discussed in the early part of the work.

It will also be proper for me here to advert to the mechanical construction of these arches;—they are all composed of hard burnt paving bricks, and mortar made of lime, hydraulic cement, and sharp sand:—the bricks were all dipped in water before they were laid, and the mortar was used in very small quantities, few of the joints being more than one-eighth of an inch in thickness:—the keys are all formed of marble, and were fitted to their places by the stonecutters after the completion of the brickwork; these keys are four inches wide at the bottom and six inches at the top. Notwithstanding the versed sine of these arches is but eight feet and a half, while they each cover a room of fifty feet square, and contain 117,000 bricks, the weight of which is nearly *three hundred tons*, there was no sinking at the crown of any of them when the centres were removed beyond one-eighth of an inch. It was naturally expected that the compressibility of the materials would cause considerable depression, but the excellence of the workman-

ship has produced an unusual firmness in the work, and which reflects great credit upon the superintendent under whose directions it was executed.

The arches over the rooms in the third story being unrestricted as to height, I have given them the form of pendentive domes with semi-circular sections: these arches are constructed with the same degree of care and accuracy as those in the lower stories, and their appearance since the centres have been removed fully realizes our expectations.

All the columns on both the flanks have been commenced; four on the eastern side have been raised to their destined height; one is ready to receive the capital, and three have their architraves upon them; nearly all the marble required for the eastern colonnade is wrought, and the whole will be completed during the winter, so as to be ready to be put together as soon as the spring opens.

A sufficient number of column blocks are prepared to complete seventeen columns, including what are already finished: twelve capitals are entirely completed, and six more are in progress of execution, most of which require very little work to finish them.

There are nineteen architraves on the ground for the exterior portico, besides the two that are placed in their destined situation.

The interior of the out-buildings, on the east of the College, have been as nearly completed as may be desirable until Councils decide upon the time for opening the Institution. These buildings are so far advanced as to admit of being prepared for occupancy at two or three weeks' notice.

The quantity of marble delivered during the past year, amounts to 35,027 cubic feet.

There are now remaining on the ground, exclusive of the wrought and unwrought materials for the exterior porticoes before alluded to, about sixteen hundred feet of finished work, three thousand and forty feet of sawed material, and seventeen hundred cubic feet of marble in the rough.

The number of bricks left on hand from the previous year, amounted to one hundred and sixty-two thousand; since which we have purchased two millions three thousand one hundred and fifty, making two millions one hundred and sixty-five thousand one hundred and fifty; of which two millions seventy-five thousand one hundred and fifty have been used in the building, leaving ninety thousand now on the ground.

It is due to the superintendents of all the mechanical branches to say, that the execution of every part of the work continues to merit the highest commendation;—the contracts have been faithfully performed, and nothing has occurred to mar the harmony that has always prevailed on the work, or to impede its progress in the slightest degree.

The expenditures from December 31st, 1837, to December 31st, 1838, amount to 229,937 dollars.

The wrought and unwrought materials now on the ground, and which have not yet been used in the building, are worth about 125,000 dollars, all of which will be available for the work of the ensuing season.

We have again covered the main building with a temporary roof, and have taken great care to prevent injury from frost; the furnaces have also been put into operation, by means of which every room in the building is kept continually warm.

The precautions that have been used to prevent the arches from being saturated by rain during the execu-

tion of the work, and which were spoken of more fully in my last annual report; together with the introduction of heated air by means of the temporary furnaces, have had the effect already to render the walls of the first and second stories perfectly dry: we may therefore proceed to finish these rooms without delay, as no difficulty whatever need be apprehended from dampness.

The main building having advanced so far towards completion, and the two eastern out-buildings being virtually finished, I would respectfully suggest the propriety of extending the work at an early day, so as to embrace all the principal objects that will require to be completed previous to the full organization of the College. The most important of these are, *the two western out-buildings,—the wall to enclose the College grounds, with the lodges and gates of entrance,—and the arrangements for supplying the establishment with water;* which, according to our present plan, will include *a laundry, drying-room, ironing-rooms, &c.*

As regards the western out-buildings, their foundations may be laid, and the walls carried up as high as the top of the basement, in the next season, without interfering at all with the rest of the work; the quantity of marble they will require will be small, and that will be but plain ashlar. These buildings will require three years to complete them; I therefore think it important to commence them at once;—the expense of progressing as far with them as I have proposed, will not exceed $20,000.

The wall to enclose the grounds, together with the lodges and gates of entrance, constitute another of the subjects I have taken the liberty to suggest for your consideration. It having been decided that the will of Mr. Girard can only be carried out by enclosing the

whole forty-five acres, it will become necessary to give early attention to the subject. The whole circuit of the ground is 7,200 feet, and (in the words of Mr. Girard) it must "*be enclosed with a solid wall, at least fourteen inches thick and ten feet high, capped with marble, and guarded with irons on the top;*"—in order therefore to conform strictly with these injunctions, and at the same time to make the wall permanent and durable, I propose to lay a course of solid granite, about one foot and a half in height, on a substantial foundation of rubble stone, so as to rise about a foot above the surrounding streets; on this granite base I would construct a brick wall, of fourteen inches in thickness, with buttresses twelve feet apart, projecting nine inches at the bottom, and battering to four inches at the top; on the inside I would build spur piers opposite the buttresses, and crown the whole with a massy marble capping surmounted with irons, as directed by Mr. Girard.

The cost of constructing the wall, as I have here suggested, will be 125,000 dollars, exclusive of the gates and lodges, which will cost about 20,000 dollars more.

It would unquestionably be more in harmony with the rest of the architecture to face this wall with marble; the additional expense of which, for the outside alone, would amount to 100,000 dollars; if, however, you should decide to execute this part of the work with bricks, we must depend upon paint for subduing such parts of it as most interfere with the design.

In view of the great extent of this wall, I think it important to make an early beginning; I would accordingly recommend that the granite be put under contract immediately, and that arrangements be made to accomplish about one-fifth of the work during the ensuing season: about 25,000 dollars will therefore be re-

quired for this part of the work, should you decide to go on with it as I have here suggested.

The plan for supplying the College with water, is also one of the subjects to which I have ventured to invite your attention. I had the honour to lay before you, in May last, a design for the attainment of this object by means of the water power at Fair Mount, and which I have the satisfaction to say, has been fully approved by the Watering Committee of the City Councils.

In as much as it becomes my duty to furnish you with an estimate of the cost of this part of the work, it will be proper for me here to advert briefly to the plan.

The surface of the ground at the base of the main building being 26 feet above the surface of the water in the Reservoirs at Fair Mount, I found it necessary in making the plan, to include a reservoir to be placed on the College land, of sufficient height to furnish all the buildings connected with the establishment with a full supply of water under a good head. I have therefore designed a building, of three stories in height, to be placed on the highest part of the ground west of Schuylkill Front street; the first and second stories of this building will comprise the laundry, drying-room, ironing-rooms, &c., and the third story will contain the reservoir.

I then propose to attach a small forcing pump to the northern wheel of the City water works, and connect it by means of iron pipes with the reservoir at the College; the power thus obtained will be no detriment whatever to the City works, and will doubtless be ample for all the purposes of the College.

The whole cost of this arrangement, including the building for the reservoirs, &c., at the College, will not exceed 35,000 dollars, and it should be remembered, that the only expense will be the first cost of the fix-

tures, as no additional superintendence will be required at Fair Mount in consequence of an additional pump for the College.

Should you decide to execute this plan, about 15,000 dollars will be required during the ensuing season to prosecute the work.

As there are no means at present for obtaining water, other than those afforded by ordinary wells, it is desirable that arrangements be made forthwith for commencing so important an appurtenance to the establishment.

As regards the amount of work that may be done on the main building, in the course of the coming season, I would respectfully say, that the flank porticoes may both be completed, all the marble tiles for the roof may be wrought, and the brickwork of the cell prepared to receive them; the finishing of the first and second stories may be progressing, and the marble tiles for the floors, the stairways, and other matters connected with the inside finish, may be put in hands immediately.

To proceed thus rapidly with the main building, about 300,000 dollars will be required for this part of the work alone during the season.

Should you therefore decide to forward the whole establishment towards completion, with as much expedition as the present state of the works, and the facilities we now have for obtaining materials will admit, the sum of 372,000 dollars will be required to prosecute the work during the present year, as follows:

For the two western out-buildings, -	$ 20,000
For the wall around the premises, -	25,000
For carrying the proposed plan for obtaining water into operation, -	15,000
Amount carried forward,	$ 60,000

Amount brought forward,	$ 60,000
For the main building, - - -	300,000
And for completing the two eastern out-buildings, and paying what yet remains due upon them, -	12,000
Making as before stated, - - -	$ 372,000

In conclusion, I would only observe, that there will be no difficulty in accomplishing all that I have mentioned before the close of the present year; provided we are informed of your decision at an early day, so as to enable us to make the necessary arrangements for materials previous to the opening of the season.

I have the honour to be, gentlemen, with great respect, your obedient servant,

THOMAS U. WALTER, *Architect.*

Girard College, January 21, 1839.

To JAMES HUTCHINSON, ESQ.,
Chairman of Building Committee,
Girard College for Orphans.

It was a part, and in the estimation of the testator, an essential part, of his improvements and arrangements for the Orphan establishment, that the whole of the grounds should be enclosed by such a wall—just as essential in his view, as the College itself. For, there is still another provision in the Will, which would perhaps be inefficacious without it. I mean that which is expressed in the following language, page 24, to wit: "nor shall any such person ever be admitted for any purpose, or as a visitor, within the premises appropriated to the purposes of the said College."

Such being the Will, the Codicil recites the purchase of the land now built upon, being forty-five acres and a fraction, and then proceeds: "Now I declare it to be my intention, and I direct, that the Orphan establishment, provided for in my said Will, instead of being built as therein directed upon my square of ground between High and Chestnut and Eleventh and Twelfth Streets in the City of Philadelphia, shall be built upon the estate so purchased from Mr. W. Parker; and I hereby devote the said estate to that purpose, exclusively, *in the same manner as I had devoted the said square*, hereby directing that *all* the *improvements* and *arrangements* for the said Orphan establishment, *prescribed* by my said Will *as to said square*, shall be made and executed upon the *said estate*, just as if I had in my Will devoted the *said estate to said purpose*." There is no ambiguity here. The testator meant there should be none, and has been even redundant in guarding against it, as the underscored words will show. The *estate* is put in place of the *square*. The *estate* is devoted, exclusively, in the *same manner* as he had devoted the *square*. *All* the *improvements* and *arrangements* prescribed by the Will as to the *square*,

are to be made upon the *estate*, just as if the *estate* had been in the Will *devoted* to the purpose. The estate is thus put for the square, and to be treated in all respects as the square was directed to be. The *square* was to be surrounded by a wall. The *estate* is therefore to be surrounded by a wall. The wall was one of the *improvements* and *arrangements* for the square, and a very material one. It is therefore to be *made* and *executed* upon the *estate*. So the Codicil says, expressly. The only question is whether it is practicable. There can be no doubt that it is practicable. The wall will be of much greater extent, and will cost more money. The testator was not ignorant that such would be the result; and if, with full knowledge, he has chosen to encounter it, no one can say to the contrary.

I am, therefore, of opinion that the whole *estate* must be surrounded by a wall, as prescribed in the Will.

JOHN SERGEANT.

Washington, January 18, 1839.

RESOLUTION

Of the Watering Committee of the City Councils, on the subject of a Supply of Water for the College.

Office of the Watering Committee,
City Hall, January 25th, 1839.

Extract from the Minutes of the Watering Committee of the 24th instant.

"*Resolved*, That the Building Committee of the Girard College be informed, that the Watering Committee will recommend to Councils, the propriety of supplying the Girard College with the Schuylkill water, from the Works at Fair Mount, by means of a forcing pump attached to the shaft of a wheel, to be erected hereafter: The cost of said pump, iron pipes, and the laying of the same, to be paid out of the income of the Girard Estates: The water to be furnished by agreement, conditioned by the provisions governing the contract supplying the western District of Spring Garden with the Schuylkill water: The water rent to be assessed by the City, as early as the College shall require its supply."

SAMUEL W. RUSH, *Register*.

SEVENTH

ANNUAL REPORT

TO THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.

1840.

REPORT.

To the Building Committee
of the Girard College for Orphans:

GENTLEMEN,

It devolves upon me, in pursuance of the duties of my appointment, to lay before you an account of the progress of the work during the past year, and its present state; the amount of disbursements, and a plan of operation for the ensuing season.

The deep interest you take in the subject, and the constant supervision you have bestowed, both individually and collectively, over every portion of the work, seems to render the performance of the first part of my duty almost useless, inasmuch as you are undoubtedly as well acquainted, from your own observation, with the progress and state of every part of the buildings, as I am. This Report, however, being intended more as a record of what we all know, than a means of imparting information, I proceed to lay before you an account of the progress we have made during the year.

Our first business in the spring was to raise the columns and architraves in the third story of the north vestibule, and prepare both vestibules for the upper

arches;—this was accomplished sometime in July, and the arches were all finished early in the fall. The vaulting of the building is therefore all completed.

The walls for supporting the marble roofing tiles have been erected over the whole of the cell, thus making an entire finish of all the brickwork, except what is required over the ceilings of the porticoes. The building is therefore fully prepared to receive the roof, a portion of which has already been laid, for the purpose of exhibiting its design; all the tiles for constructing it are under contract, and about one-half of them are now on the ground.

The columns on both flanks are all erected, except three on the western side, and these only require their capitals to complete them.

The entablature on the eastern side is finished, with the exception of a small portion of cornice, and nearly all the materials for the western entablature are now on the ground.

The three capitals required to finish the western columns are completed, and eight more, intended for the end porticoes, are in hands and partly finished. Thus we have *eighteen* finished capitals (including those that are used in the building,) leaving *sixteen* more to be completed, *eight* of which, as I have just remarked, are now in hands.

Blocks of marble for *twelve* bases are now on the ground, leaving but *four* more to be delivered.

A sufficient number of column blocks are on hand to construct five of the end columns, leaving *eleven* out of the *thirty-four* yet to come:—there are also

architrave blocks enough to finish the portico on the western side, leaving all the architraves for the end porticoes yet to be delivered.

The whole quantity of marble furnished since the last Annual Report, amounts to 37,891 cubic feet, 670 roofing tiles, and 490 narrow tiles for covering the junction of the flat ones:—24,295 cubic feet have been used in the building, leaving 13,596 remaining on the ground, 3460 of which are wrought for different parts of the work; 2120 feet have been sawed for various purposes, and 8016 feet still remain in the rough; the chief of which will, however, be wrought during the winter.

The bricks that have been delivered in the past year amount to 969,700, in addition to which there were 162,000 remaining on hand at the close of the previous season, making in all 1,131,700; of which we have used in the building 1,015,700, leaving 116,000 now on the ground.

The wrought and unwrought materials which have not yet been used in the buildings are worth about $145,000: they consist chiefly of such portions of the work as will be required during the ensuing season.

The two eastern out-buildings are finished, and ready for occupancy.

The expenditures, from December 31, 1838, to December 31, 1839, amount to $231,018 23.

The execution of the various parts of the work continues to entitle the workmen, as well as the several superintendents, to the highest praise. The contracts have been executed with promptness and fidelity; and all who are concerned in the work seem to be actuated

far more by a national pride, and a personal ambition, than by a desire for gain.

The vaulting of the main-building being now completed, and the centres, or supports, removed from the arches, it will be proper for me here to remark, that every arch stands firm, and without the slightest depression or fracture. The permanency of construction, therefore, respecting which Mr. Girard has expressed himself so emphatically, has been satisfactorily attained.

A small frame building has been erected on the western part of the grounds, for the purposes of a Magnetic Observatory.

This structure is composed entirely of wood put together with copper nails, to avoid magnetic attraction, the slightest degree of which would completely destroy its usefulness:—the outside is weatherboarded, and the inside plastered; and no iron, nor materials with any ferruginous properties whatever, are used in its construction. It embraces a room for observations 20 feet wide, 40 feet long, and 15 feet high, with an apartment of 10 by 15 feet on the western side, for convenience in recording observations, &c., during the winter, as the nature of the instruments is such as to preclude the possibility of warming the main room, without rendering them useless.

The windows are made with double sash, so as to insure an equality of temperature, and to prevent currents of air. The south window is so constructed as to admit of being opened to the roof, and the same opening is continued along the summit to the middle of the building, so as to admit the free use of a transit

instrument for obtaining time. Piers are made of marble for the instruments for measuring the horizontal and vertical intensities, and also for the transit instrument; and, in short, every arrangement has been made to bring into use the many valuable instruments belonging to the College, and to render the building useful to the Institution in all its future operations.

As the progress of the work has not been as rapid as many of our fellow citizens have hoped, and expected, I deem it my duty to offer a few words of explanation on that subject.

As it respects the costliness of the plan, excepting alone the outside finish, permit me to say that Mr. Girard himself has willed it so:—he has given us length, breadth, and height—he has directed us to arch all the rooms and floor them with marble—to cover the building with marble—to make the stairs of marble—and in short the whole of his injunctions as to the interior, are of such a nature as to render every thing that has been done in the execution of the plan, indispensable to the complete performance of the requirements set forth in the Will;—and in no way could the views of Mr. Girard, respecting the cell of the building, have been fully carried out at a less cost than that of the present plan. Nothing, therefore, could possibly have been omitted except the surrounding portico, and this portion of the building was adopted by Councils under circumstances of great deliberation, and with a very unusual concurrence of opinion.

Shortly after the Ordinance was passed for commencing the work, a committee of sixteen gentlemen

was appointed jointly by the Councils and the Trustees, to mature a plan and present it for the consideration of Councils at some subsequent meeting:—this committee consisted of gentlemen of the purest taste, the most matured judgment, and the greatest legal knowledge; and the express object of their appointment was to report such a plan as would meet at once the intentions of Mr. Girard, the credit of the city he so fondly cherished, and the approval not only of their constituents, but of all succeeding ages.

With this joint-committee, the idea of a surrounding portico originated, none of the designs which were presented to Councils, (in pursuance of their advertisement,) having any such appendage. The plans were accordingly made, and after many days' anxious deliberation, they decided unanimously that the portico should surround the *whole* building, and that it should embrace the three stories in height. The designs were then laid before Councils, and after great consideration, they were adopted with but two dissenting voices. A full set of drawings was accordingly made, and the edifice commenced under these instructions.

The plan of the surrounding portico, therefore, having been suggested and adopted by the wisest and the best of our citizens, the most of whom are now passed out of office; and the details of the whole having been studied with reference to the strictest economy, as I shall subsequently show, it now only remains for us to bring the whole to completion, and all our fellow citizens will doubtless be satisfied.

In relation to the cost of executing the work, I have

only to say, that the whole is done by day's workmen, under the ablest superintendents, at the regular city prices; and it affords me pleasure further to remark, that I have never seen men work more industriously than those engaged at the College, nor overseers more vigilant and attentive to the performance of their duties; notwithstanding the compensation they receive is far, very far from extravagant:—I also here take occasion to say, that no individual on the ground has now, or ever has had the least perquisite of any description whatever; the most remote interest in any contract for the supply of materials; or the slightest opportunity of any kind for receiving any thing beyond his salary, or daily wages.

It is often objected that much of the expense might have been avoided by using a plainer order of architecture; but permit me to say that economy alone induced us to adopt the Corinthian. The plan and general style of the building being once settled, it was necessary to choose between the three Grecian orders. The Doric would have been the plainest, but as the building was to be of a certain height, according to the Will of Mr. Girard, the Doric columns, capable of reaching so high, must have been nine and a-half feet in diameter, which would have more than doubled the present expense. The Ionic order, in like manner, would have required a thicker shaft and a more expensive capital than that now executed, inasmuch as the capitals must have been made of a single block of marble; so that the order adopted, being the Corinthian, although apparently the most adorned, is in fact the cheapest.

I now proceed to meet the objections that are often made to the slowness with which the work is said to advance.

It is well known that few good mechanics are to be found in any community, who are not constantly employed; it therefore always happens when any large work is commenced, that good workmen are obtained with the greatest difficulty, and it sometimes occurs that a sudden demand for men on a great public work raises the price of labour throughout the whole country. These difficulties we have experienced to a very great degree, and at one time, in order to get stonecutters, we advertised for several weeks in succession, in Boston, New York, and Baltimore, and the result was an accession of *three* men. And further, we have been in a situation since the third year of the work, to employ every good stonecutter in the city and county of Philadelphia, without a single exception: and if those who are of opinion that the College should have been finished before this time, will take the trouble to make themselves acquainted with the subject, they will find, that if all the inhabitants of Philadelphia had agreed five years ago, to suspend all sorts of building, and allow every man who could handle a mallet and chisel to work on the College, it would scarcely now have been completed;—and it is also a fact worthy of remark, that we have had constantly in our employment, for several seasons past, more than half of all the journeymen stonecutters of Philadelphia. Were we, therefore, to push the work any faster, we would inevitably enhance the price of labour throughout the country, and fail even then to

accomplish our object, as there is little doubt that other employers would advance their prices also, and thus leave us in no better circumstances than we now are. If employment on the College buildings for stonecutters was to last forever, we might then be justifiable in endeavouring to obtain workmen, by advancing their wages, as such a course would naturally tend to the gradual increase of this class of mechanics; but the fact is widely different:—should Councils continue to make such appropriations, from time to time, as will enable us to carry on the work as rapidly as our present force will admit, in less than *four* years we shall discharge from the College, more stonecutters than are now engaged, as I before remarked, in all Philadelphia:—if, therefore, we offer inducements to increase their number beyond the constant wants of the community, for the purpose of attempting to advance the work with greater rapidity, without having it in our power to give them permanent employment, we shall certainly act a most unkind part to that valuable class of our citizens.

But, independent of the impossibility of progressing with greater rapidity, I think it may be safely affirmed that no edifice, of corresponding magnitude and finish, was ever before constructed as rapidly as the College. Of modern buildings, we have the Madeleine Church at Paris, the architecture of which is equal in magnitude to that of our building; but the columns being composed of a multitude of small stones, and the interiór being finished in a single chamber, the labour is materially lessened; which is however made up in a measure by the richness of interior finish; but the

length of time which has been occupied in building this structure is twenty-seven years, exclusive of the periods of difficulty in France, by which the public works throughout the country were suspended.

The Paris Exchange may also be adduced in proof of what I have said:—this edifice covers less ground than the College, its height is not so great, and consequently the features of its architecture are much smaller; and the length of time actually occupied in its construction was about fifteen years.

The College was commenced late in the summer of 1833; it has therefore been in hands little more than six years; and I find by calculation, that *two-thirds* of the whole work is now accomplished; it will therefore require about *four* more years to bring it to a final completion, should means be afforded us to advance as rapidly as heretofore.

It now remains for me to suggest for your consideration, a plan for prosecuting the work during the ensuing season.

The main-building being prepared for the marble roof, and the entablature on the eastern side nearly completed, I propose to commence laying the tiles on this side early in the spring; and with a view to this arrangement the workmen are now actively engaged in preparing them, *fifty* of which are already finished, and we shall probably have one-third of all that are required to roof the building, done by the opening of the spring.

While the roof is progressing on the eastern side, the western entablature may be finished, inasmuch as nearly all the marble required for this part of the

work will be prepared during the winter. The roof may then be commenced on the western side also, and in all probability the whole of this important part of the structure will be completed before the close of the season.

The building is now enclosed, and the principal part of it is thoroughly dry;—the inside work may therefore be advanced with great rapidity. I therefore respectfully suggest that arrangements be immediately made to bring the whole interior to completion as soon as possible.

In my last Annual Report, I suggested the propriety of extending the work so as to embrace the *two western out-buildings*, the *wall around the premises*, with the *lodges* and *gates* of entrance, and the *buildings connected with the plan for obtaining a supply of water*:— the commencement of these various portions of the establishment was however postponed, and our whole attention during the past year has been directed to the main-building. I would therefore venture now to propose that the work be extended so as to embrace at least the *two western out-buildings*, as these may be advantageously carried on in connexion with the main-building.

To advance with the work thus rapidly we shall require an appropriation for the present year of 200,000 dollars, in addition to the balance on hand from last year, which amounts to 109,100 dollars.

But should it be deemed inexpedient to appropriate so large an amount during the present embarrassed state of the times, our operations may be confined to finishing the flank porticoes, putting up the four

corner columns, and roofing the building, all of which may be accomplished with what remains of the last appropriation.

I have the honour to be, gentlemen,
your obedient servant,
THOMAS U. WALTER, *Architect.*
Girard College.

To James Hutchinson, Esq.,
Chairman of Building Committee
of the Girard College for Orphans.

EIGHTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS.

D. WINEBRENER, *Chairman.*

Read in Common Council, January 14, 1841.

PHILADELPHIA:

1841.

REPORT

OF THE

BUILDING COMMITTEE

OF

GIRARD COLLEGE FOR ORPHANS,

TO THE SELECT AND COMMON COUNCILS OF PHILADELPHIA.

AGREEABLY to Ordinance, the Building Committee of the Girard College for Orphans present the annual report of their proceedings. The Girard College, highly interesting as it must be to our fellow-citizens, has progressed, the past year, as rapidly as the magnitude of the work, with the limited appropriation that the Committee had at their disposal, would permit, and no exertion has been spared by the Committee, or those under their direction, to hasten its final completion; the structure and workmanship of which, is not surpassed in any country. The Committee are under the impression that it would not be advisable to commence the erection of either the

additional out-buildings the ensuing season, but to apply all their resources to the completion of the main building.

The temporary roof of the main edifice has not been removed during the past summer, hence a considerable saving has been effected in the funds, for which the balance of the appropriation at commencement of the year, amounted to $109,100, this sum being much smaller than has usually been appropriated, consequently the Committee were obliged to retrench all other expenses, and apply all their funds to the accomplishment of the columns, and the eastern and western porticoes, the completion of which are required before the roof can be constructed. The Committee refer Councils to the report of the Architect, which specifies the different amounts of money to be appropriated, provided Council shall require the Building Committee to prosecute the completion of the building as fast as it is desirable, and as recommended in the Architect's report. The Committee also take pleasure in informing Councils that they have recently thoroughly examined the College building, and are happy to say it stands firm, and unsupported by any artificial means, reflecting the highest credit on the Architect and mechanics of the building. They also avail themselves of this opportunity, to express their entire approbation of the manner in which the superinten-

dents have prosecuted the work under their immediate control.

The Committee also concur with the Architect in expressing their approbation of the numerous workmen employed at the building, who have, throughout, given examples of skill, sobriety, and industry, rarely if ever surpassed.

They would respectfully refer Councils to the Report of the Architect, which accompanies this, for a more definite and explanatory account of the construction and progress of the building.

The Committee cannot close their report without bearing testimony to the untiring skill and energy at all times displayed by the Architect, Mr. Walter, in the various duties of his appointment.

In conclusion, it will, at all times, be their aim to transact the duties assigned them to the best of their abilities, and with a rigid attention to economy, and the bequest of their City Benefactor.

All of which is respectfully submitted.

D. Winebrener,
William Morris,
James Y. Humphreys,
John C. Davis,
Samuel W. Weer,
James Rowland,
M. Newkirk,
Isaac Elliott.

REPORT OF ARCHITECT.

To the Building Committee
of the Girard College:

GENTLEMEN,

THE limits to which we have been confined in our operations at the College, during the past year, in consequence of the embarrassed state of the times, have materially retarded the general progress of the work, and rendered it necessary for us to direct our attention exclusively to such portions of the building as were considered the most likely to cause future delay.

In the early part of the season, it was decided that the expenditures for the year should not exceed the balance of the appropriation then on hand, amounting to $109,100; and in order to make the most advantageous disbursement of that sum, it was resolved by the Committee, on the 11th of March last, to suspend all preparation for the roof, and the finish of the interior, and to attend principally to the advancement of the porticoes. We have accordingly been occupied, during the whole year, chiefly on that part of the work.

The colonnades on both the flanks, including the four corner columns, are now completed, leaving but

six columns to construct on each end, to finish the Peristyle. The shafts of the corner columns, and those on the western flank, have not yet been fluted, but those on the eastern side are entirely finished and the scaffolding removed.

The vaulting over the eastern portico is finished, the walls, to support the roofing tiles, constructed, and the centering removed. The centres for the arching of the western portico are prepared, the arches over the intercolumniations behind the Frieze are turned, and the whole entablature completed; the vaulting from the cell of the building to the entablature is, therefore, all that remains to finish the construction of the western side also.

Of the *twelve* capitals required for the end porticoes, *six* are commenced, and the workmen now engaged in carving, will complete them during the ensuing season.

Of the *twelve* bases yet required, there are now on the ground, *ten* top-pieces, *nine* of which are wrought, and *seven* bottom-pieces, all of which are in the rough.

Thirty-six pieces of column stuff for the end porticoes have been delivered, of which *two* are wrought, and the rest in the rough; they will make about *three* columns of the remaining twelve.

We have also unwrought material for *two* architraves, leaving *twelve* more to be obtained.

One hundred and fifty-three thousand four hundred

bricks have been delivered during the past year, making, with the 116,000 on hand at the commencement of the season, 269,400, of which, there have been used in the building 219,600, leaving about 50,000 now on hand.

The marble delivered at the work, since the last annual report, amounts to 15,718 cubic feet, 787 roofing tiles, 786 saddle tiles for covering the joints, and 5685 flooring tiles.

A sufficient quantity of marble for the roof over the cell, and the flank porticoes has, therefore, been delivered, of which 327 flat tiles, and 312 saddle pieces, have already been wrought.

The advanced state of this part of the work, renders it particularly desirable to roof the building during the ensuing season, the whole of which may now be accomplished with an appropriation of $45,000.

There are now on the ground, about 105,000 dollars worth of wrought and unwrought materials, on which about $63,000 have been paid, leaving 42,000 yet due. It should, however, be remarked, that most of the materials now on the ground, which have not been paid for, have been delivered under an agreement which prevents any claim being made for payment, until they are wanted for the work.

The building is protected from the weather by means of a temporary roof; beside which, the top of the whole work has been well covered with a coating

of hydraulic cement; and pipes inserted to convey any water that may find its way on it, into sinks in the cellar. Fires are kept constantly in the furnaces, as they have been for the three previous winters; the building is, therefore, not only well protected from the weather, but also well warmed.

The first work to claim our attention in the spring, will be the arching of the western portico, and the construction of the marble roof, all of which will require about - - - - - - - - - - - $45,000

The cast-iron ribs, trusses, and glass for the *eight* skylights, and the lead and workmanship required in the construction of the gutters, so as to make an entire finish of the roof over the cell of the building and the flank porticoes, will cost about - - 5,800

To continue the carving, so as to complete the *six* capitals, now in hand, during the year, it will cost, for work and materials, in addition to what is now on the ground, - 9,500

Should it be deemed expedient to proceed with the columns of the south portico, it will require, to complete and set the *six* bases, about - - - - - - - - - - - 1,900

And for the six shafts, in addition to the materials already paid for, - - - - - 31,500

The two western out-buildings may be commenced, and the basements constructed for about - - - - - - - - - - - - - 20,000

These buildings will require *three* years to complete them; it therefore becomes important to make an early beginning.

The expenditures from the 31st of December, 1839, to the 31st of December, 1840, amount to $102,913 92.

Before closing this record of our proceedings, it devolves on me to say, that the execution of the various parts of the work reflects the highest credit on the several superintendents, as well as the workmen, and my only regret is, that, in the course of the past year, we have been compelled, by a temporary want of means, to part with many who have, heretofore, laboured skilfully and industriously with us; and who would, no doubt, have laboured with us to the end, had the progress of the work not been retarded by circumstances beyond our control.

I have the honour to be, Gentlemen,
Very respectfully,
Your obedient servant,
THOMAS U. WALTER,
Architect of Girard College.

January 2, 1841.

To D. WINEBRENER, ESQ.
Chairman of the Building Committee of the Girard College for Orphans.

NINTH ANNUAL REPORT

OF THE

BUILDING COMMITTEE AND ARCHITECT

OF THE

GIRARD COLLEGE FOR ORPHANS.

January, 1842.

NINTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA,

D. WINEBRENER, Chairman.

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
L. R. BAILEY, PRINTER.
1842.

REPORT OF THE BUILDING COMMITTEE.

TO THE SELECT AND COMMON COUNCILS
OF THE CITY OF PHILADELPHIA.

AGREEABLY to Ordinance the Building Committee of the Girard College respectfully

REPORT,

That the work under their charge has been prosecuted during the past season with as much rapidity as the means at their disposal would allow; and notwithstanding the amount expended has been much less than that of previous years, the fact that it has enabled them to accomplish the roofing of the building, has of itself given peculiar interest to their labours. To construct a marble roof according to the injunctions of the Will, so as to protect the building effectually from the weather, and at the same time to withstand the variableness of our climate, has always been considered one of the most difficult as well as important portions of the work; and the Committee have now the satisfaction to say, that all their expectations concerning it have been fully realized. It is permanent

and beautiful, and of its durability no one who examines it can doubt;—it is also completely watertight;—and the form of the tiles of which it is composed, is such as to render it impossible ever to leak.

The carving of the capitals has progressed satisfactorily, and the southern portico has been considerably advanced.

For further particulars in relation to the work, the Committee refer to the annexed Report of the Architect.

In consequence of the depreciation which has taken place in the value of most of the securities which constitute the College Fund, the progress of the work has been unavoidably retarded;—and unless some measures are taken by Councils either to replace what has been thus impaired, or to raise means by some other process for carrying on the work, we can scarcely hope to see it advance in the future as rapidly as it has during the past year.

The present state of the works will admit of an expenditure of $250,000 being advantageously made during the ensuing season; they would therefore respectfully suggest the propriety of adopting some measures by which that sum may be appropriated;—they would also suggest that steps be taken to realize a similar amount in the succeeding year, and the sum of about $150,000 in 1844 to complete the work.

The Committee feel gratified in stating the in-

creased rapidity with which the building progressed after the difficulties with the workmen had been adjusted, which was mainly owing to the adoption of the contract system in preference to the former system of day work. Added to the above advantage, the plan of contracting has resulted in a saving to the College Fund, during the last summer, of upwards of $9,000.

In submitting the foregoing, your Committee express their satisfaction with the unremitted efforts manifested by the Architect and other officers connected with the building, in the prosecution of their respective duties.

All which is respectfully submitted.

D. WINEBRENER,
J. Y. HUMPHREYS,
JOHN C. DAVIS,
JAMES ROWLAND,
M. NEWKIRK,
ISAAC ELLIOTT,
J. J. BOSWELL,
JACOB E. HAGERT.

REPORT OF THE ARCHITECT.

GIRARD COLLEGE, January 12, 1842.

To the Building Committee
of the Girard College.

GENTLEMEN:

In pursuance of the duties devolved upon me by your resolution of the 31st ult., I proceed to lay before you an account of "the progress of the work during the past season;—its present state;—the amount of money expended;—and a statement of what remains to be done to complete the establishment, with an estimate of the cost."

The expenditures for the year having been limited to an appropriation of $80,000, in addition to an unexpended balance of $6,186 91 remaining on hand at the commencement of the season, it was resolved by the Committee to confine the work chiefly to the arching of the western portico, the construction of the marble roof, the columns of the south portico, and the carving of the capitals. The workmen have accordingly been engaged throughout the year exclusively on these portions of the building.

Three of the capitals for the south portico are completed, and the remaining three are now in progress of execution.

All the columns of the south front are commenced, and their average height is fourteen feet.

Three of the capitals for the northern portico are in hands, one of the bases is completed, and four more are partly finished.

The arches over the western portico were completed early in the season, and the centres on which they were constructed have all been removed.

In consequence of a difference having arisen between the Building Committee and the Journeymen stonecutters, as to the proper rate of wages, the marble work was suspended for more than two months.—In order to bring these difficulties to a conclusion, an arrangement was made with David Sunderland for executing the remaining tiles required for the roof, and for finishing all the capitals for the columns by contract, at prices considerably under what these portions of the work had hitherto cost by the day.

This arrangement resulted in the return of the workmen to their labours; and the rapidity with which the work was afterwards prosecuted, enabled us to bring the whole roof to completion early in the month of October.

This roof being one of the most important features of the building, and being now entirely finished, it

will be proper for me here to advert briefly to its design.

It consists of marble tiles *four and a half* feet long, *four* feet wide, and *two and three-fourth* inches thick; every superior tile overlaps the one below it; and the junction of every two adjoining tiles is covered with a strip of marble *four and a half* feet in length, *ten* inches in width, and *six* inches in thickness.

To support these tiles, brick walls of nine inches in thickness are built *three feet nine inches* apart, across the whole surface of the upper arches, from side to side of the building;—the top of each wall is formed with a declivity from the ridge to the eaves, corresponding with the pitch of the pediments.

The large tiles are laid on these walls, beginning at the eaves and extending to the ridge, each superior tile overlapping the one below it six inches.—The sides of these tiles are elevated an inch and a half above the general surface to prevent the water from running into the joints at their junction; and the narrow tiles which cover these joints are hollowed out so as to embrace the projection of each contiguous tile.

All the joints and overlappings are so formed as to prevent the admission of water either from the force of beating rains, or from capillary attraction;—at the same time their design is such as to admit of their being laid without coming actually in contact with

each other; thus rendering them free to expand and contract with the various changes of temperature, without producing leaks;—the whole is therefore rendered water tight without depending at all on cement.

The plan of supporting the tiles on walls affords access at all times to the under side of every tile;—and in order to facilitate their inspection, openings are left in the walls opposite each skylight, by which a portion of light will be admitted into every compartment.

The gutters are formed of flagstone and bricks laid in hydraulic cement, and securely covered with heavy milled lead.—These gutters are so constructed as to prevent any water from running over the eaves:—by this plan the cornices will not be liable to the mutilation and premature decay to which they would otherwise have been subjected, and which mars many of the noblest structures of ancient as well as modern times.

The conductors for carrying the water from the roof consist of heavy cast iron pipes of *ten* inches in diameter, securely put together, and embedded in the walls of the building.

The marble delivered during the past year amounts to 10,440 cubic feet.—There have also been delivered since the last report 224,700 bricks, which, together with the 50,000 on hand at the commencement of the season, makes 274,700, of which 271,200 have been used in the building, leaving 3,500 now on the ground.

I now proceed to comply with that portion of your resolution which requires me to furnish "a statement of what remains to be done to complete the establishment, with an estimate of the cost."

As it respects the *main building*, the principal objects which remain to be accomplished, are the finishing of the interior, embracing the marble stairways, marble floors, doors, windows, furnaces, plastering and painting;—the construction of the north and south porticoes, with their banding, arching, and marble roof; the fluting of the columns of the western portico; the floor and ceiling of the entire peristyle; and the outside steps.

In the *eastern out-buildings*, the boilers, ovens, and coal-grates are yet required; also an arrangement for obtaining a supply of water, including hydrants, sinks, baths, and fixtures in the Lavatory.

Two *out-buildings* remain to be constructed on the west of the College, similar to those on the east; the grounds around all the buildings are to be filled up and regulated; and a wall to enclose the premises, with its gates of entrance, is yet to be built.

All that now remains to complete the whole establishment, may be accomplished with economy for the sum of $650,000.

The correctness of my former estimates having of late been frequently called in question, it is due to myself to say, that the several portions of the work for

which estimates have from time to time been furnished have, in every instance, been executed for the estimated sum.

I may here also be permitted to remark, that every building for which I have ever furnished an estimate, has been executed for a sum within the bounds of the calculation, except where the plan has been changed, or additions have been made which were not originally contemplated.

The only instance which has occurred in reference to the College, in which there would seem to be ground for censure on the subject of estimates, is the hasty opinion I gave, as to the probable cost of a plan which had just been suggested, and which was still in embryo.—This opinion, or estimate as it has been improperly called, may indeed, have been very far from correct; but it is respectfully suggested that the circumstances under which it was called forth, have not been sufficiently considered.—These circumstances are briefly as follows.

Immediately after the enactment of the ordinance relative to the construction of the College, a building committee was appointed, consisting of four members from each Council.—This committee, together with an equal number from the Board of Trustees, and the Architect of the College, were directed to determine, "as soon as practicable," upon a plan for the building or buildings, and report the same to Councils.

The joint committee met for the first time on the 5th of April, 1833, and appointed a sub-committee to report a plan.—After several days' deliberation, it was agreed, on the 18th of April, to recommend a building such as described by Mr. Girard, with a portico embracing its whole height, and extending around the entire structure, after the manner of a Greek temple. —I accordingly prepared the drawings, and submitted them, together with the estimate in question, on the 23d of April, being but *five days* after the general design of the building was agreed upon; it must therefore be obvious, that in so short a time it would have been impossible to consider any of the details of construction; or even to arrive at tasteful proportions, in the composition of the order.—The most that could then be accomplished was to present the general appearance of the building, leaving all the minutiæ for subsequent adjustment.

It would indeed have required several months to have made the necessary studies, prepare the drawings, and obtain all the information requisite to the formation of a correct estimate.—The time allotted by Councils for the preparation of the *original* designs was *two months;* and even that was considered by some of the competitors as not sufficient, and it was subsequently extended to *five months.*—Now, it is hardly to be expected that your Architect could have digested a plan, far more difficult to arrange and

adapt to the Will than any which were submitted, and furnish a correct statement of the cost of executing such a plan, in *five days*, when *five months* were considered by some as requisite for the task.—The error was, to have ventured any expression of opinion whatever, under circumstances which of themselves show that it was impossible to be accurate.

But the habit of the times was then such, that no committee could probably have been selected from our whole population, who would have been willing to wait until accurate drawings could be made for every part of the work, and its cost ascertained from actual calculation; or who could have been induced to think of the matter in any of its bearings, as we now think of it;—the very suggestion of such an idea would have been disastrous to the Architect.

The disposition of mind in the entire community was such as to brook no delay, and to spare no expense.—Every thing was then tending upward with unexampled rapidity, and the cost of an object was too frequently the last thing to be gravely considered.

But notwithstanding the College has been a more expensive work than was anticipated at the time the plan was first suggested, had no subsequent depression taken place in the securities which constituted the fund, the whole establishment might by this time have been nearly, if not quite completed, and considerably more than *a million of dollars* left to maintain the Institution.

In view of these facts it is respectfully asked, that the estimate which accompanied the report of the joint committee to Councils in April, 1833, may be considered in connexion with the time and circumstances under which it was submitted; and not as though it were the work of yesterday.

On the other hand, I beg leave to remark that a resolution was passed by Councils on the 14th of February, 1839, requiring information as to the amount that would be necessary to finish the College, with all its appurtenances; in pursuance of which I presented an estimate amounting to *one million and ninety-seven thousand dollars.*—Since that time $418,-428 have been expended, leaving $678,572, according to that estimate, to complete the work;—and it should here be observed that I have recently laid before you a proposition to finish the whole establishment myself, by contract, in *two and a half years* from the first of April next, for $650,000, being $28,572 less than the estimate of 1839.

Should it be decided to proceed thus rapidly with the work, I propose to accomplish during the ensuing season, the construction of all the marble stairways in the main building; the laying of a portion of the marble floors around all the rooms and vestibules, and the finishing of the marble skirtings throughout the building to receive the plastering; the completion of the marble paneling of the windows in the lower story; the putting up of all the wooden jamb casings,

and the grounds for plastering; the completion of the skylights; the plastering of the whole establishment; the erection of the columns and architraves of the south portico; and the enclosing of the two western out-buildings, viz. the construction of all the masonry, marble-work, and brick-work; all the joists for the floors of the several stories; the copper roofs, and every thing necessary to put both buildings under roof; all of which may be done for the sum of $250,000.

In the year 1843, I propose to complete all the out-buildings; to make an entire finish of the interior of the main building; to finish the south portico, and the marble roof over it; to finish the capitals and bases of the north portico; and to complete the shafts of the northern columns, the execution of which will likewise require $250,000.

During the year 1844, I propose to bring the whole work to completion, by finishing the northern portico, and the roof over it; fluting and finishing all the columns; laying the tiles of the portico floors; constructing the steps; building the surrounding wall, and gates of entrance; regulating the grounds, and doing every thing necessary to an entire finish, the cost of which will be $150,000, making the aggregate cost of finishing the establishment amount to $650,000, as before stated.

The whole amount expended on the work, from its commencement to the 31st of December, 1841, is

$1,287,278 44; of which there has been derived from the interest of the Fund, the sum of - $724,050 05
and from the disposal of portions of the principal, - - - - - - - - - - 563,228 39

making as above, - - $1,287,278 44

The following is a recapitulation of the expenditures of the several years:

In 1833,	- - - -	$ 69,996 00
1834,	- - - -	112,048 00
1835,	- - - -	121,079 00
1836,	- - - -	153,949 74
1837,	- - - -	181,839 79
1838,	- - - -	229,937 00
1839,	- - - -	231,018 23
1840,	- - - -	102,913 92
1841,	- - - -	84,496 76
Amount required to complete the work, according to the proposition before alluded to: In 1842,	- - - -	250,000 00
1843,	- - - -	250,000 00
1844,	- - - -	150,000 00
Thus the whole cost of the establishment when finished, will amount to		$1,937,278 44

The following are the Stocks and Loans originally set apart by the Commissioners of the Girard Estates, to constitute the College Fund:

6331 shares of stock in the Bank of the United States, - - - - - -	$ 664,715 00
8 certificates for loans to the State of Pennsylvania, - - - - - - -	1,221,785 00
1 certificate for loan to the City Corporation, - - - - - - - - - -	113,500 00
	$ 2,000,000 00

Of these securities there have been disposed of at different times, to meet the demands for constructing the College, and for the use of the Trustees, the sum of - - - - - - - - - - - - - - - $ 631,597 90
the net proceeds of which amounted to 563,228 39

So that the aggregate loss by the sale of stocks and loans, to this date, assuming their value at the Executors' appraisement, is - - - - - $ 68,369 51

The whole amount of securities remaining on hand of the College Fund, according to the prices at which they were valued in the aforesaid appraisement, is $ 1,368,451 56, as follows:

5331 shares of stock in the Bank of the United States, - - - - - -	$ 559,755 00
Certificate for loans to the State of Pennsylvania, the par value of which is $ 636,050 48, - - - -	726,749 56
Carried forward, - -	$ 1,286,504 56

Brought forward, - -	$ 1,286,504 56
Certificate for loan to the City Corporation, the par value of which is $ 72,200, - - - - - - - - - -	81,947 00
	$ 1,368,451 56

It appears, from the foregoing statement, that the whole amount of the principal expended in constructing the College, and for the use of the Trustees, to the present time, is $ 631,597, the rest of the means having all been afforded by the interest of the fund; thus it is plain, that if no depreciation had taken place in the value of the stocks and loans set apart for building the College; and had they all continued to yield the rate of interest they did at the time they were appropriated, there would now be remaining upwards of a million and a half of dollars.*

The subject is thus presented to your consideration with great respect, by

Your obedient servant,

THOMAS U. WALTER, *Architect,*
Girard College for Orphans.

DAVID WINEBRENER ESQ.
Chairman of the Building Committee
of the Girard College for Orphans.

* For the foregoing information relative to the funds, I am indebted to Benjamin Jones Jr. Esq., Treasurer of the Girard Trust.

TENTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA,

JOHN C. DAVIS, Chairman.

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
L. R. BAILEY, PRINTER.
1843.

REPORT

OF THE

BUILDING COMMITTEE

OF

GIRARD COLLEGE FOR ORPHANS,

TO THE SELECT AND COMMON COUNCILS OF PHILADELPHIA.

THE BUILDING COMMITTEE of the Girard College for Orphans, respectfully

REPORT,

That the work has been prosecuted during the past year with as much rapidity as the funds appropriated by Councils for that purpose would permit. For a particular detail of their operations, they refer to the accompanying Report of the Architect, in whose ability and zeal in the discharge of his duties they desire to express their unshaken confidence. From this it will appear that much has been done during the past season towards the completion of the main-building. The marble stairways have been completed. The plastering of the interior has been nearly

finished, and considerable progress has been made in the erection of the porticoes. They have the satisfaction to add that what has been done has been well done, and on the most economical terms.

The plan adopted by a former Committee of executing the several portions of the building by contract, instead of employing workmen by the day, has also been resorted to in the operations of the past year: and the result has satisfied the Committee that, by carrying out this system wherever it is practicable, a large expenditure of money may be saved, and the work be equally well performed.

The important question is now presented, whether the work is to be vigorously prosecuted during the ensuing season, or whether it shall remain comparatively stationary.

The completion of the Girard College for Orphans at the earliest practicable moment, is a matter in which the honour of the City is deeply concerned: and your Committee feel confident that no effort in their power will be spared by Councils for the accomplishment of this most desirable object—alike demanded by a high sense of duty and a just regard for the public interests.

Two years, it will be seen from the Report of the Architect, are all that are required for the completion of the whole work, provided the necessary funds can be obtained. It is not the province of your Committee

to suggest schemes for that purpose. But they would respectfully urge upon Councils the expediency of taking immediate measures to raise the funds that may be required for the completion of the College within the period above designated. They would desire during the ensuing year to commence the erection of the Western out-buildings, which may without disadvantage be carried on simultaneously with that of the principal edifice.

They therefore respectfully ask from Councils an appropriation for the current year of $300,000. And they deem it not out of place to add, that such an appropriation, while it would enable them to advance the work very far towards completion, would afford them the gratifying means of relieving the pressing necessities of a large number of industrious citizens whom the embarrassments of the times have deprived of employment.

JOHN C. DAVIS,
GIDEON SCULL,
M. NEWKIRK,
JAMES J. BOSWELL,
JAMES ROWLAND,
P. M'CALL,
JAMES Y. HUMPHREYS,
JAMES LESLIE.

Philad., Jan. 12, 1843.

REPORT OF THE ARCHITECT.

GIRARD COLLEGE, December 31, 1842.

To the Building Committee
of the Girard College.

GENTLEMEN:

In compliance with your resolution of the 24th instant, I respectfully submit the following report of the progress of the work during the past year.

On the 24th of March last, an appropriation was made by Councils of 80,000 dollars, in addition to an unexpended balance of $2{,}403\frac{54}{100}$ dollars remaining on hand from the previous year, making $82{,}403\frac{54}{100}$ dollars; of which, $76{,}600\frac{42}{100}$ dollars have been expended, leaving $5{,}803\frac{12}{100}$ dollars to meet outstanding bills.

The amount thus placed at the disposal of the Committee being insufficient for carrying on all parts of the work, it was decided that the best means to promote the interests of the College would be, to employ the sum appropriated chiefly in prosecuting the interior finish of the main-building, and the columns of the southern portico.—Contracts were accordingly entered into for the plastering, for constructing the

marble stairways, for the glass and cast-iron work of the skylights, and for all the carpenter's work of the main-building.—Arrangements were also made for proceeding with the columns of the southern portico, and for completing the capitals of the northern portico.

The plastering has been finished, except that of the vestibules, which has been deferred in consequence of that portion of the building being occupied by the marble masons.

All the stairways are completed; and as the directions of the Will in reference to their arrangement are such as to involve a larger expenditure than any other portion of the interior finish, it will be proper in announcing their completion to allude briefly to the plan and the manner of its execution.

The words of the Will in reference to these stairways are as follows:

"In the north-east, and in the north-west corners "of the northern entry or hall on the first floor, stairs "shall be made so as to form a double staircase which "shall be carried up through the several stories; and, "in like manner, in the south-east and south-west "corners of the southern entry or hall, stairs shall be "made on the first floor, so as to form a double stair-"case, to be carried up through the several stories;— "the steps of the stairs to be made of smooth white "marble, with plain square edges."

We are thus directed to carry up a stairway of

white marble in each of the four corners of the building from the bottom to the top.

The plan upon which they are constructed is that of "geometrical stairs," having one end of each step secured in the wall, and one edge resting on the step below.—Their appearance is exceedingly light, while at the same time the principles upon which they are designed, the accuracy of the workmanship, and the excellence of the material, ensure for them a degree of permanency and durability commensurate with the rest of the structure.

The width, or "*going*" of these stairways, in the clear of the wall, is 5 feet 3 inches, and two landings or "*quarter paces*" are introduced in each story:—the breadth and height of the steps are so proportioned as to make the ascent easy for children, that the upper rooms may be rendered as useful as possible for the purposes of the institution; an extraordinary height having been unavoidably given to the stories to conform to the requirements of the Will.

The columns of the southern portico have all been constructed, leaving but six to finish on the northern front to complete the entire peristyle:—Of these, one base and one frustrum of a shaft are now set, three pieces of the remaining five bases are wrought; several unwrought frustra of shafts are on the ground; four of the capitals are entirely finished, and the re-

maining two, which embrace all that will be required for the building, are in hand, and will be completed during the winter.

The entablature of the southern front has been commenced, seven of the blocks which compose the architrave have been set, and three more are on the ground, leaving eighteen yet to be delivered to complete that portion of the work;—these blocks measure when finished 21 feet 5 inches long, 4 feet 3 inches high, and their average thickness is 16½ inches;—four of them placed edgewise constitute the architrave over one intercolumniation, thus requiring 28 blocks for the seven intercolumniations of each end portico.

The whole of the crowning moulding of the architrave is wrought, also about one-fourth of the frieze, forty running feet of cornice, and all the ashlar required for the pediment.

The unwrought materials now at the College, in addition to what has already been referred to, embrace 452 marble tiles, and 376 saddles for the roof over the porticoes, leaving 80 tiles and 172 saddles yet to be delivered: there have also been furnished 14,793 marble flooring tiles (being about two-thirds of the quantity required), and a large amount of marble suitable for the outside steps and the flooring of the portico.

The skylights are all completed; so that the build-

ing is now effectually and permanently protected from the weather.—These skylights are composed of cast-iron tiles so formed as to present an exterior appearance corresponding with the rest of the roof; nine of them are placed over each of the large rooms in the upper story, and six over each of the stairways; and in the centre of every tile two lights of glass are inserted, measuring 42 inches long, 19 inches wide, and half an inch thick:—by this design we avoid any projection above the surface of the roof, so that no obstacle is presented to the free passage of the water, while at the same time its beauty is preserved by not interfering with the uniform appearance of the projecting tiles and saddles.

The carpenter's work of the main-building being limited by the Will to the windows and doors, that department of the work is of minor importance; all that has been done during the season consists of the preparation of the doors to receive the plastering, and the completion of about two-thirds of the window frames and shutters.

Although the work has not been prosecuted during the past year as rapidly as we could have desired, it is nevertheless evident from the recapitulation here given, that we have made considerable progress in some of its most important features.—It is now so far advanced as to admit of being finished in two years,

to accomplish which it would require an appropriation of 300,000 dollars for the next season, and 270,000 the year following.

I have the honour to be, gentlemen,
with great respect,
your obedient servant,
THOMAS U. WALTER, *Architect*,
Girard College.

JOHN C. DAVIS ESQ.
Chairman of the Building Committee
of the Girard College for Orphans.

ELEVENTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA,

JOHN C. DAVIS, Chairman.

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
L. R. BAILEY, PRINTER.
1844.

REPORT

OF THE

BUILDING COMMITTEE

OF

GIRARD COLLEGE FOR ORPHANS,

TO THE SELECT AND COMMON COUNCILS OF PHILADELPHIA.

THE BUILDING COMMITTEE of the Girard College for Orphans respectfully present the following

REPORT:

The appropriation for prosecuting the work during the past season, being limited to 55,000 dollars, with an unexpended balance from the previous year of 5,803 dollars, the Committee deemed it inexpedient to extend their operations beyond the several portions of the work already commenced; they have therefore confined the means placed at their disposal, to the southern portico, the enclosing of the building, and the capitals for the columns of the northern portico.

At the close of the previous year, a large amount had been expended by the contractors in preparing materials for the southern portico, over and above what had then been used in the building; and the Committee have now the satisfaction to say, that the most of the work of the past season has been executed out of these materials, and that nearly all of them

have been used and paid for, thus reducing our obligations without incurring new liabilities.

The materials now on the ground, including the labour already expended on them, are worth about 52,500 dollars, and the present liabilities amount to 19,900 dollars, 10,000 dollars of which consists of a per centage retained, according to agreement, as security on contracts until the completion of the work.

Our present indebtedness is therefore reduced to 9,900 dollars, to meet which there is a balance of appropriation remaining on hand of 6,121 dollars, leaving the sum of 3,779 dollars unprovided for, all of which consists of obligations for materials, for which payment cannot be demanded according to contract, until they are required for use in the construction of the building. It should also be remarked, that in consequence of the work of the past season having been chiefly executed out of materials that had been previously prepared, our indebtedness has been reduced during the year about 34,000 dollars.

Since the last annual report, the Committee have had one of the large rooms in the out-building nearest the College fitted up with cases, in which the philosophical and experimental apparatus, the books, antiquities, furniture of Mr. Girard, and other curiosities have been placed; so that they may now be seen to advantage, while at the same time they are protected from injury.

The Committee refer Councils for further information to the accompanying report of the Architect;—and they would here observe that in consequence of his having engaged to execute a distant work, he has relinquished his salary for the present year. In anticipation of this event, he has prepared detailed drawings and estimates of every part of the building, and has made such arrangements as will enable him to conduct the work in a satisfactory manner by correspondence and occasional visits, which he generously offers to do without any expense to the College.

The Committee are perfectly satisfied with this arrangement: and from the personal knowledge they have of the preparations he has made for his temporary absence, they have no reason to apprehend that any difficulty whatever will arise in the prosecution of the work; and unless the appropriation for the present year shall be much larger than it has been for some years past, any additional expense for superintending the work will be unnecessary.

JOHN C. DAVIS,
JAMES Y. HUMPHREYS,
M. NEWKIRK,
WILLIAM MORRIS,
JAMES J. BOSWELL,
ISAAC BARTON,
G. SCULL,
P. M'CALL.

Philad., Jan., 1844.

REPORT OF THE ARCHITECT.

GIRARD COLLEGE, December 30, 1843.

To the Building Committee
of the Girard College.

GENTLEMEN:

The operations of the past season having been brought to a close, I respectfully submit the following report of the progress and state of the work.

At the termination of the previous year, a balance was left in the Treasurer's hands of - - - - - - - - - - -	$ 5,803 12
To which was added by an appropriation of Councils on the 4th of May last, the sum of - - - - - - - - - - -	55,000 00
Making, - -	$ 60,803 12
The expenditures of the present year amount to - - - - - - - - - - -	54,681 96
Leaving an unexpended balance of appropriation amounting to - - - - -	$ 6,121 16

The most of which will be required to meet outstanding bills.

The amount thus placed to the credit of the College fund being insufficient for any extensive plan of operations, it was agreed to confine the work chiefly to the southern portico, the entire entablature of which has been completed;—the two remaining capitals for the northern portico have likewise been finished; also the carpenter's work of the window frames and shutters.—This embraces all the work of the season; and although the appropriation has been comparatively small, I have the satisfaction to say, that it has enabled us to complete the enclosing of the building,—to finish all the capitals of the columns, —and to execute the most expensive and difficult portions of the southern front; leaving nothing but the pediment, and the roof over the portico, to finish that part of the building.

It should also be remarked, that nearly all of the foregoing work has been executed out of materials which the contractors had prepared during the previous year, and which at the close of the season remained unpaid for; we have thus been enabled to reduce our obligations without incurring new liabilities.

The materials now on the ground, and which have not yet been used in the building, are worth about 52,500 dollars:—they consist of *six* finished capitals for the columns of the northern portico, *three* finished frustra of the bases, 36 running feet of cornice mouldings, 8,174 feet of marble for outside steps, flooring of

porticoes, ashlar for the pediment, &c., 8 blocks of wrought granite for supporting the arches over the intercolumniations, 20 cwt. of iron bars for the northern portico, 30 cwt. of milled lead for the gutters on the roof, 452 flat roofing tiles, 376 saddle tiles, and 14,793 flooring tiles.

The character of the work of the past year is equal in every respect to what has heretofore been done, and all our expectations as to the permanency of the structure are fully realized.

I am, gentlemen, with great respect,
your obedient servant,
THOMAS U. WALTER, *Architect*,
Girard College.

JOHN C. DAVIS ESQ.
Chairman of the Building Committee
of the Girard College for Orphans.

THIRTEENTH ANNUAL REPORT

OF THE

BUILDING COMMITTEE AND ARCHITECT

OF THE

GIRARD COLLEGE FOR ORPHANS.

January, 1846.

THIRTEENTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA,

J. AGNEW, Chairman.

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
L. R. BAILEY, PRINTER.
1846.

REPORT OF THE BUILDING COMMITTEE.

TO THE SELECT AND COMMON COUNCILS
OF THE CITY OF PHILADELPHIA.

The Building Committee of the Girard College for Orphans, respectfully submit their Thirteenth Annual Report.

In consequence of the very liberal appropriation made by Councils, the Committee have been enabled to prosecute the work entrusted to them with great rapidity; they have nearly realized all they expected or promised to perform this season, and the community may now look forward with confidence to the prospect of its early completion.

The principal cause of not accomplishing all that was intended to have been done during the past season, was the difficulty of procuring marble for the main building. The Committee had taken the precaution to devote the whole of the unexpended balance of the previous year to the purchase of marble, to be delivered early in the spring, but in this they were disappointed, as the material was not delivered

within the time specified. The Committee however must not be understood as censuring the contractor, as they have reason to believe that he exerted himself to the utmost of his ability to furnish it in proper time. When we take into consideration the quality of the marble, and the size of the blocks required for the columns and architraves, it is not surprising that the performance of this duty has been attended with delay. This difficulty is now surmounted, as all the important pieces for the northern portico are on the ground; notwithstanding the delay thus occasioned, had the weather continued favourable a few weeks longer, the northern portico would have been entirely finished.

The Committee desirous of carrying forward the work, and believing it would meet the approbation of Councils, have continued the operations during the winter, by putting the fluting of the columns on the western flank under contract, on which about thirty of the marble masons are now engaged; another portion of them are at work in the main building, dressing and setting the flooring tiles.

The prosecution of the work during the absence of the architect, has been faithfully carried on by the superintendent, Mr. Findley Highlands, in strict conformity with the plans and drawings, and in a manner that meets entire approbation.

The quality of the material used and the work done during the last year, we believe, is equal in every respect to that of previous years.

The enclosing of the two western out-buildings was given out by contract: the marble work to Mr. William Struthers, the brick work to Mr. Joseph S. Walter, and the carpenter work to Mr. John Lindsay. These buildings would have been enclosed previous to the first of January, had not the winter set in unusually early, and prevented the completion of the marble work; the walls however, are protected, and will not receive injury during the winter; they are so far advanced that they can be finished early in the spring.

The committee are happy to have it in their power to announce to Councils the return of the Architect, Thomas U. Walter Esq., from his labours in a foreign country, and that he is now actively engaged in maturing his plans, and will devote the whole of his time and talents to the vigorous prosecution of the work. Should Councils co-operate and second the efforts of the Committee by making the appropriation required by the estimate of the Architect, they trust that the whole of this great work will be completed early in the year 1847.

On the 1st of January, 1845, there remained of the appropriation of the previous year, an unexpended

balance to the credit of the Committee, amounting to - - - - - - - - - - - - - - -	$15,142 56
Add Appropriation of 1845, - - -	225,000 00
Making a total of - - - - - - - - being the entire sum subject to the control of the Committee during the past year.	$240,142 56
Within that period the expenditures have been - - - - - - - - -	158,859 56
Leaving a balance of - - - - - -	$81,283 00

Of this sum about $26,500 will be required for the payment of outstanding debts, and the balance for fluting the western columns now under contract, for constructing the marble flooring of the interior, and the steps for the exterior of the main building, &c.

For a more particular statement of the progress of the work during the past year, and the amount required to make an entire finish, the Committee refer to the Report of the Architect, submitted herewith. They also invite the special attention of Councils to the estimates therein presented, for completing within the present and early part of the ensuing year, all of the College buildings and appendages.

Being assured that the whole can be completed within the time specified, the Committee ask that the

sum of $175,000 be placed at their disposal, which will enable them to make the necessary contracts, and have all the parts progressing simultaneously; they therefore append hereunto the draft of an Ordinance for that purpose.

JOHN AGNEW, *Chairman.*
WILLIAM MORRIS,
JOHN RODMAN PAUL,
JOHN C. DAVIS,
ALGERNON S. ROBERTS,
ISAAC ELLIOTT,
JAMES J. BOSWELL,
JACOB AMOS.
Committee.

An Ordinance making an appropriation for the construction of the Girard College for Orphans.

SECTION 1. *Be it ordained and enacted by the citizens of Philadelphia in Select and Common Councils assembled,* That the sum of one hundred and seventy-five thousand dollars be and the same is hereby appropriated for the farther construction of the Girard College for Orphans for the ensuing season.

REPORT OF THE ARCHITECT.

GIRARD COLLEGE, December 27, 1845.

To the Building Committee
of the Girard College.

GENTLEMEN:

In conformity with your instructions, I proceed to lay before you a summary of the progress which has been made towards completing the College buildings during the past year, with an account of the materials now on the ground, and an estimate of what will be required to make an entire finish.

The work has been chiefly confined during the season to the northern portico, and the western out-buildings; and I have the satisfaction to say, that these portions of it have been prosecuted with great zeal and activity. Notwithstanding there have been many, and serious delays in the delivery of the marble, which could not have been foreseen, we have very nearly realized the execution of all that was proposed in the last Annual Report.

All the columns and architrave, and most of the frieze of the northern portico, are constructed; the level cornice is all wrought, and a considerable portion of it set; all the work of the pediment is wrought

except a few pieces of the raking cornice; 267 roofing tiles and 160 saddle tiles have been executed, leaving but 6 tiles and 152 saddles yet to be done to complete every thing pertaining to the roof.

The marble work for enclosing one of the western out-buildings is entirely completed, and that of the other is ready to receive the cornice;—two or three weeks more of mild weather would have enabled us to put both of these buildings under roof; it will therefore require but a very short time after the spring opens to finish all that it was designed to accomplish on these buildings out of the present appropriation.

About 8000 superficial feet of flooring tiles have been wrought, and the workmen are about commencing to lay them, the bricklayers being now engaged in bringing the floors to the proper level. We propose to prosecute this part of the work during the winter, the building being comfortably warmed by the temporary furnaces, and it being desirable, as well to hasten the work, as to give employment to the workmen at a time when they will need it most.

The fluting of all the columns on the western flank is under contract, and the stonecutters are now engaged in prosecuting the work, which will also be continued during the winter, small moveable shops having been placed around the columns, which effectually protect the workmen from the weather, and at

the same time constitute an excellent and economical scaffolding, which admits of being lowered from the top by ropes as the work progresses: these columns will, no doubt, all be fluted by the opening of the ensuing season.

A considerable quantity of the marble for the outside steps of the main building has been delivered, and the contractors intend to go on with the fulfilment of their respective contracts during the winter.

The materials now on the ground, of every description, wrought and unwrought, which have not yet been employed in the buildings, are worth about $54,500. They embrace the marble for the whole of the frieze, cornice and pediment of the northern portico, (excepting about 1000 cubic feet which remain to be delivered); also 310 feet of marble for outside steps of the main building; about 2,300 feet suitable for the flooring of the porticoes; 267 roofing tiles, 170 saddle tiles, 16,750 flooring tiles, (leaving a deficiency of about 8,000); all the copper required for roofing the western out-buildings; $2,000 worth of flooring boards; and a considerable quantity of boards and timber suitable for the out-buildings and the centering of the arches of the northern portico.

After a careful revision of my former estimates, and having, in fact, re-estimated all that remains to be done, I find that the entire cost of finishing all the buildings, enclosing the whole 45 acres, and filling

up and regulating the grounds, will be about $204,000 —as follows—

For finishing the northern portico, including the marble roof, arching, &c.,	$20,760 00
For constructing the ceiling of the porticoes and fluting the western columns,	9,500 00
For marble work of the portico floor, including materials, cellar window gratings, &c., - - - - - - - - -	15,350 00
For finishing the interior of the main building, - - - - - - - - - - -	48,500 00
For the marble work of the outside steps of the main building, including setting iron-work and materials, - - - - -	14,500 00
For foundations of the outside steps, &c.,	5,700 00
For finishing the out-buildings, - - -	61,800 00
For paving footways around all the buildings, digging and constructing gravel walks, &c., - - - - - - - -	2,660 00
For wall to enclose the whole 45 acres including gates of entrance, - - -	66,000 00
For constructing drains, regulating grounds and incidental expenses, - -	14,000 00
Making, -	$258,770 00

To this sum should be added the debts now due to contractors, and the per centage retained on contracts to insure

Brought forward, -	$258,770 00
their faithful performance, amounting in the aggregate to - - - - - -	26,513 00
Making, -	$285,283 00
From which deduct the unexpended balance of the last appropriation, - - -	81,283 00
Leaving, -	$204,000 00

as the amount required, over and above the present appropriation, to complete the entire work.

In the report of 1844, made by the Superintendent during my absence, you will observe that the estimate for finishing the work, which was collated from the detailed calculations I made previous to my leaving the city, fixes the expense of the wall for enclosing the grounds, with the gates of entrance, at $45,000, while in the foregoing estimate I make it to cost $66,000; this difference arises from the fact that the wall in the former calculation was designed, at the suggestion of the Committee, to embrace *but* 23½ *acres* of the ground, as will be seen by referring to the original document, while in the latter case I have estimated the expense of enclosing *the whole* 45 *acres.*

As it regards what yet remains to be done, I would respectfully suggest that the several portions of the work not already contracted for, be put immediately under contract, so that every part of it may be prose-

cuted simultaneously. Should this course be pursued, I have little doubt that the whole may be completed in the early part of the year 1847.

I have the satisfaction to say, that the execution of every part of the work merits unqualified approbation, and reflects great credit on the Superintendent as well as the contractors. The plans of the northern portico have been carried out with the same scrupulous exactness which has characterized all other portions of the building, and the entire work has been conducted with extraordinary system and economy. As I have been absent for more than a year, I take the greater pleasure in thus rendering to the Superintendent and his coadjutors the credit to which they are so justly entitled.

I have the honor to be, gentlemen, with great respect and consideration,

Your obedient servant,

THOMAS U. WALTER, *Architect,*
Girard College.

J. AGNEW ESQ.
Chairman of the Building Committee
of the Girard College for Orphans.

FOURTEENTH ANNUAL REPORT

OF THE

BUILDING COMMITTEE AND ARCHITECT

OF THE

GIRARD COLLEGE FOR ORPHANS.

January, 1847.

FOURTEENTH

ANNUAL REPORT

OF THE

BUILDING COMMITTEE

OF THE

GIRARD COLLEGE FOR ORPHANS,

TO

THE SELECT AND COMMON COUNCILS

OF

PHILADELPHIA,

JOHN RODMAN PAUL, Chairman.

TOGETHER WITH

A Report to the Building Committee,

BY

THOMAS U. WALTER, Architect.

PHILADELPHIA:
L. R. BAILEY, PRINTER.
1847.

REPORT OF THE BUILDING COMMITTEE.

TO THE SELECT AND COMMON COUNCILS
OF THE CITY OF PHILADELPHIA.

THE Building Committee in presenting their Fourteenth Annual Report, have much satisfaction in being able to announce to Councils, that the hopes entertained in their last Report of an early completion of the College, have a fair prospect of being realized.

The work has been actively carried on during the past season, and no efforts have been spared to signalize the present year, by the final completion of an edifice unsurpassed in this country, whether we regard the chaste and beautiful character of its architecture or the great strength and solidity of its construction,—a temple of elegance, worthy the noble purpose for which it is to be dedicated, and an enduring memorial of the great "merchant and mariner," by whose munificent means it has been erected.

The Report of the Architect herewith submitted, will give the details of what has been effected during

the past season. More would have been accomplished, had there not been much vexatious delay in the delivery of materials. This, however, will not affect future operations, and the Committee feel assured that by the ensuing spring there will be sufficient materials on hand to insure the completion of the marble and stone-work at an early period of the summer.

The interior of the main edifice and of the outbuildings, will in all probability be finished in April or May, and the regulation of the grounds and introduction of the water, will engage the attention of the Committee as soon as the weather will permit. These, with the ceiling of the portico and a few minor details, comprise all that remains to be done, before the buildings will be ready to receive the furniture.

The Committee have not thought it advisable to take any steps towards furnishing the buildings, deeming it better to wait until Councils shall have decided on the plan for organizing the College, as this may materially modify the arrangements for the purpose.

In pursuance of an Act of the Legislature which received the assent of Councils, the Committee have caused the wall for enclosing the College grounds to recede thirty feet within the line. A similar cession of ground has been agreed to by the owners of the adjoin-

ing land, insuring the completion of an Avenue sixty feet wide to surround the whole College area, which, when properly graded and improved, will form one of the most beautiful promenades in the country, and add much to the embellishment of the thriving district in which it is located.

Among the pleasing incidents of the past year, may be mentioned the reception of the Statue, executed by Mr. Gevelot. Competent judges declare it to be a faithful likeness of Mr. Girard, and accord to it great merit as a work of art. Thousands of our fellow citizens as well as strangers have been attracted to the College, anxious to behold this resemblance to the individual who had devoted the immense accumulation of a life of industry to objects of benevolence, and for the promotion of the prosperity of his adopted city.

The Statue will occupy a position in the southern vestibule, immediately opposite the door of entrance.

The Committee again take occasion to express the satisfaction afforded them, by the competent manner in which the Architect has fulfilled the duties of his appointment. His labours on this great work will soon be terminated, but the fruits of those labours will remain for ages, to confirm the justice of the tribute which the Committee now offer to his merits.

To the Superintendent of Marble-Work and to others engaged on the works, the thanks of the Com-

mittee are due, for the very efficient manner in which they have performed their respective duties.

In conclusion, the Committee would state that owing to the liberal appropriation of last year, a large portion of which still remains unexpended, they do not consider it necessary to ask for any further appropriation at the present time.

Respectfully submitted.

JOHN RODMAN PAUL, *Chairman.*
WILLIAM MORRIS,
JAMES J. BOSWELL,
JOHN C. DAVIS,
ISAAC ELLIOTT,
ALGERNON S. ROBERTS,
JACOB AMOS,
ROBERT HUTCHINSON.

January 2d, 1847.

REPORT OF THE ARCHITECT.

PHILADELPHIA, December 26, 1846.

To the Building Committee
of the Girard College.

GENTLEMEN:

The period having arrived when it devolves on me to lay before you an account of the progress of the work during the past year, I submit the following Report.

The entablature and pediment of the northern portico, which were left in an unfinished state at the close of the previous year, were commenced early in the spring, and on the 29th of August the stone forming the apex of the pediment was laid with appropriate ceremonies, thus completing the entire peristyle. The vaulting of the portico, and the marble roof were subsequently finished, and contracts entered into for the fluting of the northern columns.

The contracts, referred to in my last report, for fluting the western columns, were all fulfilled in the month of April, so that nothing remains to complete

the colonnade but the fluting of the *six* northern columns before alluded to, all of which will be finished by the first of February ensuing.

The marble for the steps and floor of the porticoes of the main building, and the steps and yard walls of the western out-buildings, amounting in the aggregate to 17,062 cubic feet, was contracted for early in the spring, with a fair prospect of receiving it in sufficient quantities to have enabled us to complete these portions of the work before the close of the season, but I regret to say that unforeseen and fortuitous circumstances have so interfered with the contractors as to have rendered it impossible for them to comply with their respective contracts; the quantity they have furnished amounts to 13,208 cubic feet, leaving a deficiency of 3854 feet, which will, no doubt, all be on the ground in time to insure the prosecution of the work in the spring, without further interruption.

The outside steps, and the portico floors on the northern front and the western flank, are done, and the corners returned an average distance of 60 feet on the southern front, and 70 feet on the eastern flank. These steps, together with the portico floors, have all been constructed so as to allow a free passage of air, from the cellar, to circulate under them as a preventive against the destructive action of the frost. The steps that are now finished, measure in

the aggregate, 5878 feet, and the lineal measure of those which remain to be done, amounts to 2999 feet, of which about 1060 feet are now on the ground, and the contractors are actively employed in delivering the remainder.

The marble flooring of the interior of the main building, amounting to 37,790 superficial feet, has all been laid since the commencement of the season. The tiles used in the construction of these floors have all been prepared expressly for the work; they are sawed of uniform thickness, the edges are worked square, and they are well embedded in cement, so that it will be impossible for them ever to become loose, as is frequently the case with tiles in which the thickness is not uniform throughout.

The window sash of the main building have all been made, glazed and hung, and the carpenters are now engaged in hanging the interior doors, and in making the large front doors, which will be ready to be put up in the ensuing spring.

The window guards, and the iron railings for the stairways, are all under contract, and the greater portion of them ready to be put up.

The western out-buildings, which were not under roof at the date of the last annual report, have been enclosed and plastered during the year, and are now nearly completed; the carpenters being engaged in hanging the doors and finishing the wood work, all

of which will be accomplished in six or eight weeks. The marble stairways, ovens, and most of the other fixtures required in these buildings have been finished; so that, as it respects the interior, but little remains to be done. The outside steps and the yard walls between the buildings, have not yet been constructed, in consequence of the delay experienced in the delivery of the marble; they will, however, be put in hands early in the spring, as a considerable quantity of the material is now on the ground, and a large portion of it has already been wrought.

The wall for enclosing the College grounds was put under contract in June, with the expectation that it would have been completed before the close of the season; we have, however, been disappointed, in consequence of the contractors for furnishing stone, being unable to supply it as rapidly as they anticipated. The entire length of this wall will be 6843 feet, of which 4843 feet are completed, leaving 2000 feet yet to construct, the most of the foundations of which are now laid.

The expenditures during the past year are $135,814 90; the outstanding debts, including the retention on contracts, amount to $37,000, and the wrought and unwrought materials now on the ground, which have been paid for, have cost about $7500.

In conclusion, I have the satisfaction to say, that the work is now in such a state of forwardness as to

leave no doubt that the whole establishment will be completed and ready for occupancy before the close of the ensuing season.

Very respectfully,

Your obedient servant,

THOMAS U. WALTER, *Architect,*
Girard College.

DR. J. RODMAN PAUL,
Chairman of Building Committee
Girard College for Orphans.